REPORT RESUMES

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THE EMERGING ROLE OF STATE EDUCATION DEPARTMENTS WITH SPECIFIC IMPLICATIONS FOR DIVISIONS OF VOCATIONAL-TECHNICAL EDUCATION, REPORT OF A NATIONAL CONFERENCE ON STATE DEPARTMENT LEADERSHIP IN VOCATIONAL EDUCATION (FEBRUARY 27-MARCH 2, 1967).

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FIFTY-THREE REPRESENTATIVES OF EDUCATIONAL INSTITUTIONS AND AGENCIES FROM 19 STATES, THE DISTRICT OF COLUMBIA, AND CANADA ATTENDED A CONFERENCE, WHICH WAS THE SECOND PHASE OF A MULTI-PHASE PROJECT TO IDENTIFY STATE LEADERSHIP NEEDS AND DEVELOP LEADERSHIP TRAINING PROGRAMS. THE PURPOSE OF THE CONFERENCE WAS TO CONCEPTUALIZE THE EMERGING ROLE OF THE STATE EDUCATION DEPARTMENTS AND TO IDENTIFY IMPLICATIONS FOR DIVISIONS OF VOCATIONAL EDUCATION. BACKGROUND PAPERS, DEALING WITH SOCIETAL FORCES IMPINGING ON STATE DEPARTMENT OPERATIONS, ARE INCLUDED IN PART ONE OF THE REPORT--(1) "THE CHANGING CHARACTER OF GENERAL POPULATION--IMPLICATIONS FOR EDUCATION" BY P.M. HAUSER, (2) "PROJECTIONS OF CHANGING STUDENT POPULATION" BY E.P. MCLOONE, (3) "THE CHANGING OCCUPATIONAL STRUCTURE WITH IMPLICATIONS FOR EDUCATION" BY L.A. LECHT, (4) "OBTAINING OPTIMAL EDUCATIONAL OPPORTUNITY FOR DISADVANTAGED GROUPS" BY R.D. HESS, (5) "STATE GOVERNMENT AND EDUCATION" BY L. IANNACCONE, (6) "THE EXPANDING ROLE OF FEDERAL GOVERNMENT IN EDUCATION WITH IMPLICATIONS FOR STATE EDUCATION DEPARTMENTS" BY N.A. MASTERS, (7) "EMERGING ORGANIZATIONAL STRUCTURES FOR FACILITATING EDUCATIONAL CHANGE WITH IMPLICATIONS FOR STATE EDUCATION DEPARTMENTS" BY F.J. IANNI, (8) "EMERGENT FUNCTIONS AND OPERATIONS OF STATE DEPARTMENTS OF EDUCATION" BY E.B. NYQUIST, AND (9) "THE ADMINISTRATION OF VOCATIONAL EDUCATION AS AN INTEGRAL PART OF A STATE DEPARTMENT OF EDUCATION" BY B. SHOEMAKER. PART TWO CONTAINS THREE PAPERS SYNTHESIZING THE VARIOUS VIEWPOINTS AND DRAWINGS MAJOR IMPLICATIONS AND A CHAPTER SUMMARIZING SOME OF THE IDEAS DEVELOPED DURING CONFERENCE DISCUSSION. (HC)

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Research series, no. 11

THE EMERGING ROLE OF STATE EDUCATION DEPARTMENTS WITH SPECIFIC IMPLICATIONS FOR DIVISIONS OF VOCATIONAL-TECHNICAL EDUCATION

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THE CENTER FOR VOCATIONAL AND TECHNICAL EDUCATION
THE OHIO STATE UNIVERSITY, 980 KINNEAR ROAD
COLUMBUS, OHIO 43212

The Center for Vocational and Technical Education has been established as an independent unit on The Ohio State University campus with a grant from the Division of Adult and Vocational Research, U. S. Office of Education. It serves a catalytic role in establishing a consortium to focus on relevant problems in vocational and technical education. The Center is comprehensive in its commitment and responsibility, multidisciplinary in its approach, and interinstitutional in its program.

The major objectives of The Center follow:

1. To provide continuing reappraisal of the role and function of vocational and technical education in our democratic society;
2. To stimulate and strengthen state, regional, and national programs of applied research and development directed toward the solution of pressing problems in vocational and technical education;
3. To encourage the development of research to improve vocational and technical education in institutions of higher education and other appropriate settings;
4. To conduct research studies directed toward the development of new knowledge and new applications of existing knowledge in vocational and technical education;
5. To upgrade vocational education leadership (state supervisors, teacher educators, research specialists, and others) through an advanced study and in-service education program;
6. To provide a national information retrieval, storage, and dissemination system for vocational and technical education linked with the Educational Research Information Center located in the U. S. Office of Education;
7. To provide educational opportunities for individuals contemplating foreign assignments and for leaders from other countries responsible for leadership in vocational and technical education.

Research series, no. 11

THE EMERGING ROLE OF STATE EDUCATION DEPARTMENTS WITH SPECIFIC IMPLICATIONS FOR DIVISIONS OF VOCATIONAL-TECHNICAL EDUCATION

Report of a National Conference on
State Department Leadership
in Vocational Education
February 27 - March 2, 1967

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Dick C. Rice, *Project Director*
Powell E. Toth, *Project Associate*

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The Center for Vocational and Technical Education
The Ohio State University, 980 Kinnear Road, Columbus, Ohio

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PREFACE

One of the continuing concerns of The Center is state vocational education leadership development. In initiating such a program it becomes crucial to examine the current and projected setting in which state vocational education leadership functions--that is, the State Department of Education.

We are all aware of new forces and factors in our society which impinge on state departments of education and which have implications for both the department and the division of vocational education. In planning for the conference, it was recognized that many of the forces and factors would have implications for personnel in general education as well as vocational education. Further, as an integral part of the State Department, changes in general department organization and/or operation would have implications for the Vocational Division. Therefore, The Center was pleased to co-sponsor this conference with the University Council for Educational Administration. The cooperative efforts came about through interest in state education departments and their leadership role in education.

This conference was the second phase of a multi-phase project. The first phase was a descriptive study dealing with professional personnel in state divisions of vocational education. The third phase concerns itself with specific leadership development programs for state personnel.

This report contains the nine background papers prepared by scholars on major forces and factors relevant to state department operations and the three papers prepared by individuals charged with synthesizing the various viewpoints and drawing major implications for the emerging role of state departments and vocational education divisions. A summary chapter has been prepared by the project staff summarizing the major conference inputs.

We are indebted to Dr. Jack A. Culbertson, Executive Director, University Council for Educational Administration, and members of his staff for their significant contributions to this activity. Special recognition is due Dr. Dick C. Rice, Project Director, and Powell Toth, Research

Associate, for their work on the conference. In addition, we express our gratitute to members of the conference advisory commission for their part in planning and evaluating the conference. The many worthwhile contributions of conference participants are also acknowledged.

We recognize that the role of state departments and vocational divisions is a dynamic one and that additional conceptualization, research and development are needed. We, therefore, solicit the reactions and suggestions of the readers.

Robert E. Taylor,
Director, The Center

FOREWORD

How should we provide for high quality leadership personnel in sufficient numbers to satisfy the needs of state divisions for vocational education for the future? This problem is one of the most crucial facing vocational education today. One of the primary purposes for founding The Center for Research and Leadership Development in Vocational-Technical Education was to provide the opportunity for upgrading vocational education leadership personnel through an advanced study and inservice education program.

In implementing this objective in the area of state leadership The Center has supported a major research and development thrust to determine the training needs for developing vocational education leadership personnel, to design pilot inservice and preservice programs and to develop simulation and other training materials to be used in training programs.

The first two phases of the study were: 1) A study to depict the current status of vocational education, state leadership personnel in terms of policies, numbers, education, and experience. 2) To develop a concept of the emerging role of the state division of vocational education in terms of new functions as indicated by the trends and forces in the various sectors of society.

The activities reported in this publication are concerned with the second of these two phases.

Future publications in the state leadership area will report the development of inservice and preservice programs, and the development of simulation and other materials to be used in training programs for the development of state division of vocational education leadership personnel.

Dick C. Rice
Project Director

CONTENTS

PART I

Chapter Page

I INTRODUCTION. 1

II THE CHANGING CHARACTER OF GENERAL POPULATION: IMPLICATIONS FOR EDUCATION 7
Philip M. Hauser, Professor of Sociology and Director, and Martin Taitel, Consultant, Population Research and Training Center, University of Chicago

III PROJECTIONS OF CHANGING STUDENT POPULATION. 49
Eugene P. McLoone, Research Fellow, School of Education, Stanford University

IV THE CHANGING OCCUPATIONAL STRUCTURE WITH IMPLICATIONS FOR EDUCATION . . . 67
Leonard A. Lecht, Director, Center for Priority Analysis, National Planning Association

V OBTAINING OPTIMAL EDUCATIONAL OPPORTUNITY FOR DISADVANTAGED GROUPS. . . 93
Robert D. Hess, Director, Urban Child Center, University of Chicago

VI STATE GOVERNMENT AND EDUCATION . . . 117
Lawrence Iannaccone, Professor of Education, New York University

VII THE EXPANDING ROLE OF FEDERAL GOVERNMENT IN EDUCATION WITH IMPLICATIONS FOR STATE EDUCATION DEPARTMENTS. . . 141
Nicholas A. Masters, Professor of Political Science, The Pennsylvania State University

Chapter Page

VIII EMERGING ORGANIZATIONAL STRUCTURES FOR FACILITATING EDUCATIONAL CHANGE WITH IMPLICATIONS FOR STATE EDUCATION DEPARTMENTS 163
Francis A. J. Ianni, Director Educational Institutions and Programs and Horace Mann-Lincoln Institute of School Experimentation, Teacher's College, Columbia University

IX EMERGENT FUNCTIONS AND OPERATIONS OF STATE DEPARTMENTS OF EDUCATION . . . 198
Ewald B. Nyquist, Deputy Commissioner of Education, The University of the State of New York, The State Education Department

X THE ADMINISTRATION OF VOCATIONAL EDUCATION AS AN INTEGRAL PART OF A STATE DEPARTMENT OF EDUCATION. . 257
Supplementary Background Paper
Byrl Shoemaker, Director of Vocational-Technical Education, The State of Ohio Department of Education

PART II

XI THE EMERGING ROLE OF THE STATE DEPARTMENT OF EDUCATION 283
Roald F. Campbell, Dean, Graduate School of Education, University of Chicago and Gerald E. Sroufe, Civil Rights Advisory Specialist, Equal Educational Opportunities Program, U. S. Office of Education, Washington, D. C.

XII. THE EMERGING ROLE OF STATE DEPARTMENTS OF EDUCATION WITH IMPLICATIONS FOR VOCATIONAL EDUCATION. 305
Gerald B. James, President, Rockingham Community College, Wentworth, North Carolina

Chapter Page

XIII A STRATEGY FOR STRENGTHENING STATE EDUCATION DEPARTMENTS THROUGH RESEARCH, DEVELOPMENT, AND TRAINING 319
Jack A. Culbertson, Executive Director, University Council for Educational Administration, Columbus, Ohio

XIV STATE EDUCATION DEPARTMENTS AND VOCATIONAL-TECHNICAL EDUCATION. 353
Dick C. Rice, Project Director, The Center for Vocational and Technical Education, The Ohio State University

APPENDIX 375

SELECTED BIBLIOGRAPHY. 385

PART I

CHAPTER I

INTRODUCTION

The rapidity with which we are experiencing change in our society is almost accepted as commonplace; we have come to expect every institution to feel the force of change. The situation institutions often face, however, is not merely the one of whether or not to change, but to change at what rate, and in which direction.

State government, as other institutions in our society, has changed in many respects, and it must continue to change and revitalize if it is to remain relevant in American society. The state education department, as a subsystem of state government, must also make needed changes in the remaining years of this decade if it is to be a vital force shaping American education. Similarly, it would be futile to examine the changing role of the state division of vocational education with complete disregard for the larger system: the state education department, and the relationship between state education and state government.

The literature germane to government and education and their ensuing relationships and roles includes hundreds of books and articles. Although examination of all of these is beyond the scope of this study, some of the more pertinent of these should satisfy our purpose. In spite of the volume of literature dealing with the state education department, relatively few people have a first hand knowledge of it. This may be due primarily to two factors 1) its remote client relationship and, 2) the small number of people involved, usually fewer than a small city school system in most states.

Need for Leadership

Effective leadership as a basic need in education at both the state and local levels is necessary. Education has advanced in states in direct proportion to the degree of state-wide leadership it has had available to it.[1]

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[1] Lee H. Thurston and William H. Roe, State School Administration. (New York: Harper & Brothers, Publishers, 1957), p. 409.

The state education department exerts a powerful influence on educational change, sometimes stimulating and sometimes acting as a barrier. State Field Supervisors are perceived as reflecting the desires and views of the department[2] because they have close contact with local schools.

Bailey, Frost, Wood, and Marsh found, in their study of "Schoolmen and Politics," that leadership from the ranks of professional school men and state department personnel is important in bringing about changes in state educational policy.[3] The President's Panel of Consultants on Vocational Education identified the need for more effective State Leadership to influence local vocational education programs.[4]

The authors cited here and others have written of the importance of state leadership in developing educational programs. With the passage of the Vocational Education Act of 1963 and the Elementary and Secondary Education Act of 1965 further attention has been drawn to the importance of high quality state leadership.

The principal focus of this study is upon state leadership in vocational education programs, but it seems reasonable to assume that the previous comment in general applies since vocational education divisions are subsystems of state education departments. If leadership is needed at the state level then it can be assumed all divisions need leadership. Leadership in vocational education is dependent upon well-trained leaders.

Such leadership is necessary; for defining the emerging role of the state education department with respect to vocational education, for developing and implementing new programs of vocational education to effectively meet the needs of youth and adults in our changing society, and for improving existing programs of vocational education.

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[2] Henry M. Brickell, Organizing New York for Educational Change. (Albany, New York: University of the State of New York, 1961), p. 42.

[3] Stephan K. Bailey and others, Schoolmen and Politics. (Syracuse: Syracuse University Press, 1962), pp. 107-8.

[4] Education for a Changing World of Work. (Washington: U. S. Government Printing Office 1963), p. 244.

Leadership Development

Scholars in the profession of education administration, with the support of the Kellogg-Sponsored Cooperative Programs in Educational Administration, have taken dramatic strides forward in applying the conceptual and methodological tools of the social sciences to solve the problems in school organization and administration.[5] As a result the traditional approach of outlining set procedures for specific situations in training educational leaders is being replaced by learning based upon theoretical concepts derived from careful observation and analysis of leader behavior. However, very little work has been done to specifically define the training needs for state educational supervision.

A paucity of research also exists in vocational education with respect to supervisor and leader development programs. In his article in the Encyclopedia of Educational Research entitled "Vocational Education" Wenrich lists no research on supervisor training programs in vocational education.[6] The same state of affairs is encountered in the latest number of the Review of Educational Research that is devoted to Vocational, Technical and Practical Arts Education where no treatment of the broad area of state leadership development and training is given and where the total attention to administration consists of ten references in the areas of organization, finance and evaluation.[7] In this same vein state supervisory and state leadership training programs are not treated in the 1965 yearbook of the National Society for the Study of Education on Vocational Education nor in the April, 1965 edition of the Phi Delta Kappa magazine on the same topic. These programs are also missing from the recent seven volume Review and Synthesis of Research published by The Center for Research and

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[5] Norman J. Boyan, "Common and Specialized Learning for Administrators and Supervisors: Some Problems and Issues," Preparation Programs for School Administrators Common and Specialized Learnings. Donald J. Leu and Herbert C. Rudman (East Lansing, Michigan: Michigan State University, 1963) p. 11.

[6] Ralph Wenrich, "Vocational Education," Encyclopedia of Educational Research. ed. Chester W. Harris (New York: The MacMillan Co., 1960) pp. 1555-64.

[7] Ralph C. Wenrich, Gordon I. Swanson and Rupert H. Evans, "Vocational, Technical, and Practical Arts Education, Review of Educational Research. XXXII, No. 4 (October, 1962) pp. 370-371.

Leadership Development in Vocational and Technical Education.[8]

Wenrich and Hodges in a recent study of leadership personnel needs for local systems also saw the need for qualified administrative personnel at state and national levels when they stated, "although the lack of qualified personnel to fill administrative positions in vocational and technical education also exists at state and national levels, this project was designed to deal with the preparation of persons for local leadership roles."[9]

The absence of research in the general education field led Wiles to question, present practices in training supervisors.[10] Programs specifically geared to training state supervisors are not described in the literature. In the field of Vocational Agriculture, Taylor[11] suggests a starting point by identifying 160 competencies necessary for supervisors of vocational agriculture along with sixteen guiding principles for state supervision.

Purpose of This Project

The primary purpose of this study was to develop a concept of the emerging role of the state division of vocational education in the context of the general department of education and the configuration of forces impinging upon it.

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[8] The Center for Research and Leadership Development in Vocational and Technical Education, "Review and Synthesis of Research,""(A seven volume series, agricultural education, business and office occupations education, distributive education, home economics education, industrial arts, technical education and trade and industrial education) (Columbus, Ohio: The Center, 1966.)

[9] Ralph C. Wenrich and Lewis H. Hodges, Experimental Program For the Identification, Selection, and Development of Persons for Leadership Roles In The Administration and Supervision of Vocational and Technical Education (Ann Arbor, The University of Michigan 1966).

[10] Kimball Wiles, "Supervision," Encylopedia of Educational Research ed., Chester W. Harris (New York: The MacMillan Company. 1960) p. 1445.

[11] Robert E. Taylor, "In-Service Training Needs for State Supervisors of Vocational Education in Agriculture," (unpublished Ph.D. dissertation. The Ohio State University, 1961), p. 415.

The first activity of the project was the selection of an advisory commission. This commission was comprised of the following leaders: Donald Anderson, Professor of Education, The Ohio State University; Roald Campbell Dean of the Graduate School of Education, The University of Chicago; Jack Culbertson, Executive Director, University Council for Educational Administration; Gerald James, President, Rockingham Community College, Wentworth, North Carolina; Roy Larmee, Professor of Education, The Ohio State University; Leon Minear, Superintendent of Schools, State of Oregon; Truman Pierce, Dean, School of Education, Auburn University; Dick C. Rice, Project Director, The Center for Vocational and Technical Education, The Ohio State University; James A. Sensenbaugh, Superintendent of Schools, State of Maryland; Byrl Shoemaker, Director of Vocational Education, State of Ohio; Wesley Smith, Director of Vocational Education, State of California; Robert E. Taylor, Director, The Center for Vocational and Technical Education, The Ohio State University; Ralph C. Wenrich, Chairman, Department of Vocational and Practical Arts, University of Michigan.

With the assistance of the advisory commission, a conference was planned to conceptualize the emerging role of state education departments and to identify implications for divisions of vocational education. This was accomplished by selecting participants who had the background and experience to provide maximum inputs to the conference. The participants consisted for the most part of Chief State School Officers, State Directors of Vocational Education, Professors of Vocational Education, Professors of Educational Administration, and Deans of Education. Their conference role was to provide background information on the emerging role of the state education department with specific implications for vocational divisions in light of the societal forces impinging upon education.

To facilitate accomplishment of their task the participants were furnished with eight background papers prior to the conference (the ninth paper was prepared after the conference). The "background papers" dealt with societal forces impinging upon the state education departments in general and more specifically divisions of vocational education. Participants were given a charge to read and raise questions concerning the papers before the conference. They brought their questions to the conference, and at that time the authors of the papers gave a short updating of their paper and answered questions from the group. The ensuing discussion was designed to provide input in the form of additional social forces to those outlined in the papers and to provide feedback to the authors of the papers.

Three implications papers, prepared by Campbell, Culbertson and James, were presented in total at the conference. The "implications papers" dealt with the implications for identified social forces held for; 1) the organization and administration of state education departments, 2) division of vocational education and 3) research, development and training strategies for state education departments. A detailed discussion, by the participants, followed each presentation providing additional input to the implications outlined. Many of the pertinent points brought out during these discussions are found in the final chapter of this text.

All papers prepared for the conference are found in the following text. The final chapter summarizes some of the ideas developed during conference discussion.

One of the major outcomes of this study should be a basis for helping state divisions of vocational education and other divisions of state education departments solve their leadership needs. This objective can best be served at least in part by developing effective inservice and preservice education programs for leadership development.

CHAPTER II

THE CHANGING CHARACTER OF THE GENERAL POPULATION: IMPLICATIONS FOR EDUCATION

Philip M. Hauser* and Martin Taitel**

Dr. Hauser reviews past and present population characteristics and projects future population growth. In so doing he reveals that the population explosion, the population implosion, and the changing population composition--especially in the central cities of metropolitan areas--have combined to present the schools with unprecedneted challenges, i. e., the middle class move to suburban areas thus the central city is left to those who cannot afford the move.

Introduction

Education is a strategic factor in the life of the individual, of the community, of the nation and of the world. With education of quality in adequate quantities, progress and development are not only possible, but well nigh inevitable; without it, stagnation would loom ahead. The occupational proficiencies required for welfare and progress are among the end results of education; in particular, they are direct objectives of vocational and technical education.

The task of designing and operating educational activities is, therefore, a heavy one. This conference is an obvious and overt recognition of this. Directed toward providing basic ingredients--facts and expectations about the

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*Professor of Sociology, and Director, Population Research and Training Center and Chicago Community Inventory, University of Chicago, since 1947. His publications include his most recent book The Study of Urbanization (ed. with Leo F. Schnore), 1965, as well as several other books and numerous articles.

** Consultant to Population Research and Training Center, University of Chicago, and other groups and organizations. Ph.D. University of Chicago. Author of several publications on projections and social statistics.

"purchasers" of education--for the decision-making process, it represents a sound step forward. The relevant knowledge assembled and digested will, of course, not guarantee good decisions, but it will increase the chances of success.

Prime among the relevant facets and expectations are those for the total number of persons for the geographic distribution of persons and for the attributes of persons. Only a small part of the information about people relevant to the major decisions on education can be presented in this paper. In the main, we will cover the broad overall picture for the United States; to a lesser extent, vocational and technical education with which this conference is primarily concerned. It should be recognized, however, that most or at least a very large proportion of decisions are made for local situations which vary widely from the national, regional or state picture.

Also, it should be noted that we have drawn primarily upon the publications of the U. S. Bureau of the Census. Unfortunately, the benchmark population data are over five years old, being from the Census of 1960. For some decades now, many of us have recommended that a program of quinquennial population censuses be undertaken; but the proposal has been rejected thus far, although it is again being considered by the Congress. Were such a program in effect, we could today be presenting at least preliminary results of an actual census rather than invent statistics based upon limited sample data and even weaker foundations. And, I may note the contrast between our position today and our position just about five years ago, when we were preparing a similar body of material.[1] It is regrettable that we cannot do as well today. Indications of the shortcomings of our data collection programs appear in the large number of communities which request the Bureau of the Census to undertake special censuses in the years between censuses.

The sample data upon which we must place primary reliance at this time are designed primarily to provide estimates and projections for some important items for the United States as a whole. For this purpose, they are adequate. They are not, however, extensive enough to provide estimates of the desired reliability for smaller areas or smaller groups of persons. We caution you, therefore, to keep this in mind in applying the present material to individual states or to the college and high school age groups.

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[1] Hauser, Philip M. and Martin Taitel, "Population Trends--Prologue to Library Development," Library Trends Vol. 10, No. 1 (July 1961), pp. 10-67.

The Long View for the United States

The United States has been one of the outstanding examples of rapid population growth. The long-term trend had been consistent growth but at a declining rate. The population doubled five times between 1790 and 1950--three times between 1790 and 1865 at intervals of 25 years, once in the 35-year period from 1865 to 1900, and once in the 50-year period from 1900 to 1950. Until about 1910, immigration was a major factor on the side of rapid expansion, and declining mortality rates were likewise a major factor on the side of rapid expansion. The Deep Depression's impact, together with immigration restrictions, brought both the birth rate and the growth rate to new lows during the 1930's. And, in fact, widely accepted population projections during the 30's, and some even in the 40's, offered 165 million as the peak population for the United States to be reached around the turn of the century.[2] This is in contrast with 133 million in 1940, 63 million in 1890, 32 million in 1860 and 17 million in 1840.

But the marked environmental changes during the forties and fifties gave rise to an upsurge of marriage and fertility rates anticipated neither with regard to magnitude nor to duration. In consequence, the projections of the thirties were soon contradicted. The population of the United States passed the 165 million mark in 1955, is over 196 million today, and is being projected to exceed 300 million by the turn of the century.[3]

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[2] Whelpton, P. K., Forecasts of the Population of the United States, 1945 to 1975. U. S. Governmnet Printing Office, Washington, D. C.: 1947, p. 41.

[3] U. S. Bureau of the Census, Current Population Reports. Series P-25, No. 286 (July 1964), after allowance for lower birth rates than assumed therein.

The population grwoth rate increased from 0.7 percent per annum in the 30's to 1.4 in the 40's and then to 1.7 in the 50's. The War and post-War rates, however, were still well below the 3 and 2 per annum rates of the 19th and early 20th century. But in terms of the absolute number of persons, increases are very large. Thus, from 1950 to date, the increase has been about 45 million persons--or about the same number as the combined populations of Canada and Egypt.

In looking forward to 1980, the important factor is fertility. Yet it is not possible to assess the effects of changing circumstances at this time. Experience is lacking with regard to reproductive behavior in an era of easy and effective birth-control, relative affluence and nuclear power as a factor in world politics. In addition, there is a growing appreciation on a world-wide scale of the inevitable consequences of sustained population growth--too many people for too little earth. How and at what population levels the people of the world will coordinate population and limited resources are, for the time being at least, not subject to precise determination.

Further, and most important to note, the consequences of large and rapid changes in birth rates will continue to be a feature of our population structure. Thus, the decline of the birth rate in the thirties led to a relatively *small* younger segment of the labor force in the fifties and sixties; the rapid rise in the birth rate in the decade or so following World War II will, during the relatively near-term, bring relatively large college-age and child-bearing age groups. One consequence of the latter is that, even though the fertility level (i.e., average number of births per female) may decline, the number of births will increase and remain at a relatively high level between 1970 and 1980.

In the most recent projections by the Bureau of the Census, the total population of the United States for 1980 is shown as 241 million. This projection is based upon the assumption of a moderate decline from the fertility level of 1962-65, which in turn appears to be significantly lower than the peak post war level. The projection also assumes that mortality rates will decline moderately and that net immigration will average about 400,000 per year. The mortality assumption is consistent with recorded changes over the past decade; the net immigration assumption is based upon an estimate of 371,000 average for 1961-1964 and an expected small increase as a result of the Immigration Act of 1965. Finally, the projections assume that there will be no disastrous war, widespread epidemic or similar catastrophic event.

A population of 241 million in 1980 would represent an increase after 1965 of over 47 million persons or 24.4 percent. Though such growth would be below the 28.1 percent for the 1950-1965 period, it would mean a greater increase in number, year by year, than occurred during the earlier period.

The Bureau of the Census projections for population for 1980 range from a low of 225 million to a high of 249 million. The whole of this difference reflects the range of reasonable possibilities for birth rates over the next decade and a half.

Regions and States

The Bureau of the Census estimate of the number of inhabitants of the United States as of July 1, 1965 is 193.8 million. This represents a population of 42.5 million or 28.1 percent more than the April 1950 figure of 151.3 million for the 50 States and the District of Columbia. These figures refer to the resident population, which excludes members of the Armed Forces and their dependents living abroad, crews of American vessels at sea or in foreign ports, and American citizens living in foreign countries.

Over 41 percent of our population lives in our six largest states--California, New York, Pennsylvania, Illinois, Texas, and Ohio--each with over 10 million persons. Only 11 percent of our population resides in the 21 least populated states and the District of Columbia, each of which has fewer than 2 million inhabitants.

Variation Among Regions and States

Population gains have not been evenly distributed throughout the country. Of the 42.5 million gain from 1950 to 1965, more than 43 percent was accounted for by 5 states, each of which gained more than 2 million inhabitants over the 15-year period. California alone gained over 8 million; New York and Florida, over 3 million each; Texas, 2.8 million; and Ohio, 2.3 million. At the other extreme, were West Virginia and the District of Columbia, where population actually declines, and 3 States--Vermont, North Dakota, and South Dakota--each with a gain of less than 50,000.

The West has been the fastest growing region since 1950. This is a continuation of the long-term trend maintained for more than a century. Further, the trend has--with few exceptions--held both for the Mountain Division and for the Pacific Division. From 1950 to 1965, the increase was 62 percent for the Pacific States and 53 percent for the Mountain States; in contrast, the rate for the U.S. as a whole was 28 percent.

Since 1950, variation of growth rates among the States has been substantial. Annual growth in the fifties ranged from a decline of 0.7 percent per annum to an increase of 6.0 percent per annum; for the 5-year period, 1960-1965, the corresponding range was from a rate of decline of 0.6 percent per annum to a rate of increase of 9.1 percent per annum. Further, only West Virginia continued to lose population and Nevada had the greatest rate of increase from 1960 to 1965.

The marked unevenness of population change during the fifties is dramatically shown by the proportions, for the various states, of the counties which lost population. These data reflect the extent to which migration occurred within the nation. According to the 1960 Census, there were 3,110 counties (excluding 24 districts in Alaska for which 1950 data are not available). Despite the very large population increase of 18.5 percent for the entire nation, 1536, or almost 50 percent, of these counties, actually lost population during the fifties as revealed by the Census tabulations. Some counties in every state, except Connecticut and Delaware (both substantial population increases), lost population. Even in Florida, Nevada, and Arizona, states with the largest rates of population increase, almost 20 percent of the counties registered population declines. In California, where population increased by over 5.1 million persons, 6 out of 58 counties lost population during the decade.

More important, for purposes of looking ahead at this time, is this: The diversity of population growth rates has been narrowing during the past few years. In the absence of a mid-decade census, precision is not possible on this important point, but the general drift is clear. First, for 1960-65, 40 states are included in a 0.5 to 2.4 percent range of annual growth rates; the comparable range for 1950-60 is 0.2 to 3.4 percent. Second, net migration between regions has declined since 1963; between 1962 and 1963, net migration totalled about 565,000 while between 1964 and 1965 the total was about 208.000.[4] It should be noted that the narrowing of the differences in rates of growth among the various parts of the nation is not the result of a decline in the mobility of the population. Annual surveys taken since 1948 show the proportion of population moving within the country during a given year has been stable, ranging from 18.6 to 21.0 percent. Between 1964 and 1965 it was 20.1 percent.[5] It may be that the decline in net migration between states and regions reflects an evening out of basic economic, social and political conditions over the country This observation, however, must be regarded as a tentative statement requiring investigation.

A complex of factors lies behind the difference in growth of geographical regions, of individual States, and of smaller areas. The surface manifestations are shown in statistics as components of change--migration, births, deaths. Behind them lie the more basic economic, social, and political factors.

Underlying births and deaths--the natural increase factors--are such basic factors as racial and ethnic composition, education, income level, and age composition. These differ widely among the States and among localities within States. For example, Alaska, relatively youthful in both biologic and economic terms, had a relatively high crude birth rate of 28.1 per thousand and a relatively low crude death rate of 5.7 per thousand in 1964. In contrast, in much more mature Maine, the corresponding figures were 21.8 and 11.3, respectively.[6] The same is true for the Mountain States in contrast with the Middle Atlantic Division (New York, New Jersey and Pennsylvania). Again, studies have consistently shown that fertility rates have varied with education and income.[7]

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[4] U. S. Bureau of the Census, Current Population Reports. Series P-20, No. 150 (April 14, 1966), Table A.

[5] *Ibid.*, Table 1.

The mobility of our population is probably greater than at any time since humans ceased being nomads. Thus, California and Florida, combining desirable climates with economic advantages, have drawn people to them in large numbers. By contrast, West Virginia, Arkansas and Mississippi, with problems of economics, law, and politics, have lost people, on balance, to other states. The Mountain and Pacific States have been growing rapidly as a result of migration based upon particular advantages and conditions.

Projections for Geographic Divisions

With regard to birth rates, the decline from the post-war peak has been taken into account, as has the tendency toward a narrowing of differences among areas. Similarly, following the decline which has already occurred during the past few years, the projections are based upon further declines in net migration between regions and States.

Differences in growth rates among the Geographic Divisions between 1965 and 1980 are projected as substantial. The projected rates for the Mountain and Pacific Divisions are the highest at around 39 percent; at the other extreme is the West North Central Division for which the rate is about 14 percent. However, this projected spread among the Geographic Divisions is much less than the estimated spread during the 1950-1965 period, when the rates of population increase ranged from less than 12 percent in the East South Central Division to almost 62 percent for the

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[6] U. S. Public Health Service as reported in U. S. Bureau of the Census, Statistical Abstract of the United States: 1965. (86th ed.) (Washington, D. C. 1965,) Tables 48 and 64.

[7] Wilson, Grabill, H., Clyde V. Kiser and Pascal K. Whelpton, The Fertility of American Women. (New York: John Wiley & Sons, Inc., 1958), Chaps. 5 to 7.

Pacific Division. The narrower spread projected follows the recent and expected trends of declining net migration and declining differences between regions and States in natural increase.

About 15 million or 31 percent of the total projected population increase between 1965 and 1980 will be accounted for by the Middle Atlantic and East South Central Divisions. Though their share of the total population will decline from 38.5 to 37 percent, they will continue as the most populous. These divisions are highly industrialized and urbanized, and further developments in those directions are anticipated. More of the projected increase--almost 18 million or 37.5 percent--is accounted for by the two next most populous Divisions, the South Atlantic and Pacific; their projected proportion of the total U. S. population is almost 30 percent, compared with an estimated 27 percent in 1965. These divisions include not only areas with special climate advantages, but also some which have demonstrated large industrial potentials. Should they continue to register markedly higher rates than the present more populous divisions, they would become the most populous parts of the nation.

Very mature New England, the agricultural West North Central Division, and the East South Central Division of the Deep South account for only 7 million or less than 15 percent of the projected total increase; according to the projections, they will account for only 19 percent of the population in 1980 in contrast with over 20 percent in 1965 and 23 percent in 1950 The West South Central Division, a mixture of the expansive Southwest and the Deep South is projected to continue to have almost 10 percent of the total population.

The Mountain Division, even with a projected expansion of over 3 million inhabitants or almost 40 percent, is computed to remain the smallest of the divisions with about 10.9 million inhabitants in 1980. Except between 1920 and 1930, the Mountain Division has been growing more rapidly than the U. S. as a whole since 1900. Continuation of this trend is anticipated, though the excess over the U. S. rate is projected to decline.

Projections for Geographic Divisions and, even more so, for individual States, particularly if they are small, are subject to greater error than are the projections for the United States. The range of assumptions necessary to cover future possibilities is wide in comparison with those for the nation as a whole. A most important single item is that net internal migration does not have to be projected for the nation as a whole, and net immigration is subject to rather rigid limits for a long period ahead. Thus, the national birth rate becomes the most important consideration in projecting total U. S. population, in view of the marked stability to be expected for mortality rates. But for regions or states, not only is net migration an important and potentially erratic element, but local changes in birth and death rates (for example, say, in the East South Central States) may alter substantially the course of population growth in a State or region. Caution in using the figures is obviously necessary.

Metropolitan Population: Historical Overview

Throughout its history, the population of the United States has become increasingly concentrated in urban places; and during the course of this century in metropolitan areas. In 1790, when the first Census was taken, there were only 24 urban places in this country. They contained only 5 percent of the nation's population. Only two of them had more than 25,000 persons. By 1950, there were over 4,700 places in urban territory. They included almost 97 million persons or about 64 percent of the total population. The comparable figures for 1960 are 125 million persons, almost 70 percent of the total population, in about 6,000 urban places.[8]

Even more dramatic than urban growth has been the metropolitan explosion during this century. In 1900, areas which would have been classified as metropolitan under later Federal definitions numbered about 60 and contained fewer than 24 million persons, less than one-third of the nation's population. In 1950, about 56 percent of the population, almost 85 million persons, lived in 173 Standard Metropolitan Areas, while by 1960, 63 percent of the population, or almost 113 million persons, lived in 212 Standard Metropolitan Statistical Areas (SMSA). Estimates for 1965 indicate at least 222 SMSA's with a total population of about 126 million. Further, expansion to a metropolitan population of about 170 million persons is projected for 1980.

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[8] U. S. Bureau of the Census, Census of Population: 1960. Vol. I, Pt. 1, Tables 3 and 8.

The population has become increasingly concentrated in urban and metropolitan areas as a result of basic forces which determine the distribution of population: technological, economic, social ad and political. Most important, people have crowded into urban and metropolitan areas to form efficient producer and consumer units and in response to the lure of urbanism as a way of life.

For the 1960 Census, the Federal Government (through the Division of Statistical Standards of the Bureau of the Budget) introduced the term and definition now used for the areas called metropolitan. It is the term "Standard Metropolitan Statistical Area" (abbreviated here to SMSA). This designation emphasized that, for statistical and analytical purposes, areas are more or less arbitrarily delineated as metropolitan. For 1960, an SMSA was defined as one or more central cities of 50,000 or more persons, the balance of the county or counties containing such a city or cities, and such contiguous counties as, by certain criteria, are "essentially metropolitan in character and are socially and economically integrated with the central city."[9] Despite the arbitrary character of the definition, the SMSA data are closer representations of the actual realities of our grouping of economic activities and population than are statistics relating to cities alone.

There is an important definitional matter to be kept in mind in dealing with metropolitan population changes. This is the difference between (a) change in the number of persons in a specified class (e.g., living in a metropolis) and (b) change in the number living in a specified set of fixed areas (e.g., SMSA's). Differences between the two kinds of changes may be illustrated by contrasting the statements: (a) between 1950 and 1960, there was an increase of 28.4 million in the population classified as living in metropolitan areas satisfying specified population size and characteristics; and (b) at the same time, there was an increase of only 23.6 million in the population living in the fixed areas designated as SMSA's in 1960. In this case, the figures differ, mainly because 30 or more areas classified as SMSA's in 1960 would not have been so classified in 1950; hence, the 1950 population of these areas is excluded in the "same class" comparison and included in the "same area" comparison, while the 1960 population of those areas is included in both comparisons. In addition, of course, the boundaries of some SMSA's of 1950 had been enlarged by 1960.

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[9] _Ibid._, pp. xxxi-xxxii, for full details.

Both kinds of comparisons provide insight into the nature and significance of population changes in the United States during recent decades.

Compilations of Census data over the long-term have been made upon the basis of a "same class" definition of SMSA's. For the most part, other data provide only "equal area" comparisons. And, unfortunately, only very limited data are available for dates later than the Census of 1960.

Metropolitan Growth: The Explosion of the Fifties

For the United States as a whole, SMSA population grew explosively during the fifties by contrast with growth outside SMSA's--26.4 percent as against 7.2 percent for the 212 areas defined as SMSA's in 1960. Of the total United States population increase of 28 million during the decade, about 23.5 million or 84 percent was accounted for by the 212 areas defined as SMSA's in 1960.

Regional Differences

Within this structure of change, however, there were marked differences. In the Northeast, the division of population between metropolitan and nonmetropolitan changed only slightly during the fifties, rates of growth being about the same in and outside the areas of the 1960 SMSA's (13.0 and 13.6 percent, respectively). The pattern for the North Central States approximated that for the United States as a whole with increases of 23.5 percent in and 6.6 percent outside SMSA's. The most striking changes in the division of population between metropolitan residents and others during the fifties, however, occurred in the South and the West.

In the South, the data for population change within the areas qualifying as SMSA's in 1960 do not adequately reflect the shift to metropolitan from nonmetropolitan residence. There were about 18 areas which crossed the SMSA definitional line between 1950 and 1960. When this is taken into account, there appears to have been a decline of around 800,000 persons in the nonmetropolitan population in the South; hence, metropolitan population growth exceeded the total population growth of about 7.8 million persons as a result of a net shift from nonmetropolitan to metropolitan population. This speaks of the very greatly increased importance to the South of industrial and service activities, as well as the importance of climatic advantages; it also bespeaks the sharp decline in the importance of agriculture and related activities in the South. Even so, despite the marked shift toward metropolitanization, the South remained the least metropolitanized region, with less than half its population in the SMSA's of 1960.

Essentially the same development occurred in the West as in the South during the fifties. About ten new areas qualified as SMSA's between 1950 and 1960. Taking this into account, it appears that the nonmetropolitan population in the West did not increase during the fifties, so that the population increase in the West was entirely of a metropolitan character.

Within the West, there were marked differences between the Pacific and the Mountain Divisions. Between 1950 and 1960, the proportion of the population of the Pacific Division in SMSA's (1960 areas) increased from 76.2 to 79.2 percent; in consequence, the Pacific Division had, by this measure, become as metropolitanized as the mature and highly industrialized Northeast Region. In contrast, the increase in the proportion of the Mountain Division's population in SMSA's was from 40.3 percent in 1950 to almost 49 percent in 1960. Thus, despite the larger percentage increase in SMSA population in the Mountain Division than in the Pacific Division (63.9 as against 45.8 percent), the Mountain Division remained far less metropolitanized than the Pacific Division. And, it may be noted, the change and level for the Mountain Division were about the same as for the South--the least metropolized region of the nation.

Size Differences

There was relatively little difference between growth rates for the fifties among the various sizes of SMSA's as determined by 1960 population and characteristics. Except for the "5000,000 to 1,000,000" inhabitant size class, with a rate of 36 percent, all fell within the narrow range of 23.2 percent growth rate.

Total population increases were concentrated in a few large SMSA's. The "big 5"--New York, Chicago, Los Angeles, Philadelphia and Detroit--contributed almost 6 million to the overall SMSA increase of 23.6 million; and the 19 SMSA's in the "1,000,000 to 3,000,000" size class almost another 6 million. At the other extreme, the 22 smallest SMSA's (population of less than 100,000 in 1960) contributed less than 35,000 inhabitants.

A large proportion of the SMSA population is, of course, concentrated in a relatively small number of areas. Thus, the 24 SMSA's with 1,000,000 or more inhabitants in 1960 contained about 55 percent of the total 1960 SMSA population. And, of course, a very small proportion of the SMSA population resided within a very large number of the smallest SMSA's--somewhat more than 14 percent in 111 SMSA's. Phenomena of this character have, of course, been well known to demographers and others for many years.

The distribution of metropolitan population among the size groups, as determined for the contemporaneous or current year, changed significantly during the fifties. Our five largest SMSA's in 1950, as well as in 1960, suffered a decline in relative importance within the SMSA family, even though their relative importance as a group within the United States increased somewhat during the fifties; they grew more rapidly than the rest of the United States combined, but not quite as rapidly as did the total metropolitan population. (The comparison has been made after adjustment for the definitional changes for the New York and Chicago SMSA's, so that the 1950 proportion for the "big 5" is 30.8 percent, rather than 34.7 percent.) The relative importance within the SMSA family of the large number of smaller SMSA's likewise declined during the fifties. Those with less than 500,000 persons accounted for 33.4 percent of the total SMSA population in 1950, but only 28.4 percent in 1960; and this was so despite an increase in the number of areas from 136 to 159. Thus, it was the larger, though not the largest, size groups which increased in relative importance during the fifties; for the second largest size class--the "1,000,000 to 3,000,000" class--the proportion of total metroplitan population increased from 19.4 to 26.4 percent. The increase in relative importance of SMSA's with 500,000 to 3,000,000 inhabitants was largely the result of a massive sliding up the size scale of areas but without any sliding up beyond the 3,000,000 level.

Variation Among Individual SMSA's

The overall SMSA picture during the fifties is one of very great population increase in terms of absolute numbers, in terms of percent change, and in terms of the proportion of the total population accounted for. Within the overall picture, the variation among individual SMSA's was very wide. This is shown by Table X in which the 212 areas designated as SMSA's as of the 1960 Census date, are classified by percent change between 1950 and 1960. The most striking feature of the distribution is the fact that 8 SMSA's actually lost population. At the other extreme are the 7 SMSA's which more than doubled their populations during the decade, four being newcomers to the metropolitan community. Leaving aside the high growth rates among these new entrants to the metropolitan class, the overall range of variation was from a decline of 11.2 percent to an increase of 124.6 percent.

Despite the very wide range, SMSA population growth rates were concentrated about the national SMSA rate. Thus, well over half the SMSA's, 113 of 212 grew at rates between 15 and 35 percent. The modal, or the most frequent, percentage increase was about 24 percent. This is smaller than the overall 26.4 percent increase for SMSA's, since the weight of the rapidly growing areas is less in determining a modal rate than in determining an overall rate. In the future, something like this pattern of variation may be expected.

Under favorable economic, social and climatic conditions, growth rates of more than 50 percent in a decade may be expected to occur in the future as they have in the past. In the fifties, there were 30 SMSA's with such rates. Only one, Wichita, Kansas, fell outside the South and West; and 18 were in three states, California, Texas and Florida. And, it may be noted, that 14 of the 30 would not have qualified as SMSA's in 1950, indicating that in the future, as in the past, opportunities for smaller communities to expand rapidly to metropolitan status may well be expected to occur.

Under unfavorable conditions--denudation of natural resources, and loss of comparative economic and social advantages--population stagnation and even decline may be expected. In the fifties, this apparently occurred in at least 20 SMSA's, eight with an actual loss of population and 12 with increases of less than 5 percent. Not one is in the West. The 6 in the South represent one extreme of widely varying conditions, of virtually an economic and social upheaval. Those in the Northeast and North Central regions appear to reflect a variety of underlying conditions--declinging agriculture, exhaustion of natural resources, defeat in economic struggles.

Central Cities and Suburbs

Between 1900 and 1920, the ratio between central-city and suburban populations for metropolitan areas remained almost constant, about one-third in the suburbs and two-thirds in the central cities. Since 1920, that is, since there has been wide use of 20th-century transportation and communication technology, suburbia have outpaced the central cities. In 1950, well over two-fifths of the metropolitan population was in suburia; in 1960, nearly half. Suburbia increases of 19 million persons between 1950 and 1960 represent at least 70 percent of the total change in metropolitan population (on the "same class" basis).

The decade of the fifties was critical in the relation between central-city and suburban population growth. It may well be described as the decade of suburban boom and central-city bust. The population of the suburban areas (as of 1960) of the United States--i.e., the population outside central cities, but within the SMSA's--increased by 48.5 percent. By contrast, the population of the central-city areas (as of 1960) increased by only 10.8 percent. For many individual areas, of course, the difference was much greater.

The 1960 Census was the first of our Decennial Censuses to show population losses in a large number of cities. Eleven of the twelve largest cities in 1950 registered population declines.[10]

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[10] Ibid., Table 29.

During the decade, of the 257 central cities in the 212 SMSA's, 70 lost while 187 gained population.[11]

Such population losses do not necessarily imply economic decline or stagnation in a city or area. They may reflect an interchange of place of residence and place of work within an expanding metropolitan community. This interchange is indicated by the many cases where total SMSA population increased although, for one or more central cities, population declined, including four of the five largest areas: New York, Chicago, Philadelphia and Detroit.

The data already presented understate the population decline or stagnation in the inter cores of SMSA's. They do not show population increases accounted for by annexations.[12] Overall, 4.9 million or over 86 percent of the central-city population increases was from annexations. But this is only part of the story. The significant increases of central-city population occurred in SMSA's of less than 1,000,000 persons (in 1960) i.e., the smaller and intermediate size cities, and these increases were accounted for in large measure by annexations. For SMSA's of more than 1,000,000 persons, the change in central city population was small and was exceeded by annexations. Thus, the inner cores of the metropolitan areas tended to grow very slowly or not at all because they were already filled. This is also reflected in the regional differences in central-city change. Major increases occurred in the South and West and were, in large part, accounted for by annexations. In the North, annexations were an unimportant factor and totalled less than the central-city changes in population.

The patterns of population growth were accompanied by changes in patterns of land use and in the character of communities or neighborhoods within SMSA's. Students of the city have documented growth patterns which indicate that our metropolitan areas grew outward from one or more centers of origin.[13] Although characterized by both vertical and horizonal growth, the latter was the dominant form of development. The newer areas were always those farthest from centers of origin and embodied the new advances in technology. Our metropolitan areas tended to develop defninte spatial patterns in terms of the age and the modernity of their residential structures.

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[11] _Ibid._, Table 33

[12] _Ibid._, Tables Q and R and, for details, accompanying text.

[13] Philip M. Hauser, _Population Perspectives_. (New Brunswick, N. J.: Rutgers University Press, 1960), Chapter 4.

Differences in physical facilities tended to produce a parallel socio-economic stratification of the urban and metropolitan population. Persons of the lowest income, education and occupational status, usually the newcomers to the urban environment, tended to occupy the less desirable residences toward the center of the city. Persons of higher income, education and social status tended to locate toward the peripheries of the metropolis. Agencies and institutions of all sorts tended to reflect, and are attuned to, the characteristics of the people contained in the areas in which they are located.

As our metropolitan plant aged, the early patterns of rapid growth have been paralleled by equally remarkable obsolescence and decay. Just as cities grew community by community, not structure by structure, so have the cities decayed, characterized by areas of substandard housing and by slums which have become a national disgrace. Federal, state and local programs for urban renewal have tended to consolidate efforts of slum clearance, rehabilitation and conservation. The start has been to rebuild the slum areas one community at a time. Populations of inner-zone areas are, under these programs, being uprooted and dispersed to various sections of the metropolitan areas. Inner-zones are being rebuilt or rehabilitated so as to attract higher, as well as lower, social and income groups. All this added to new developments in suburbia presages basic changes in the physical structure of our metropolitan areas, and in the manner in which they are used.

Metropolitan Population: 1960-1964

Because of the crucial importance of the metropolitanization of the United States, the experience of the fifties, even though it has the aroma of "ancient history", has been presented in detail. It has been possible to do so because we have a Census for 1950 and a Census for 1960. A similar presentation for the period since the 1960 Census is not possible; we do not have a Census of 1965 as well as a Census of 1960. For the more recent and more germane experience of the first half of the sixties, we must, unfortunately, rely upon sample surveys of limited size and upon indirect information, which can provide only estimates and fragments of limited scope. Most important, for this conference, is that local, state and regional data are available in limited amounts only.

The general development of metropolitan population, during the fifties and earlier, continued during the first half of the sixties. According to Bureau of the Census estimates, the 212 SMSA's (1960 areas) again accounted for about 84 percent of the total United States population increase from 1960 to 1965, though the proportion was much less from 1960 to 1963 and much greater from 1963 to 1965. And, the proportion of United States population living in these 212 SMSA's (1960 area) has, in consequence, increased further to 64.4 percent. The United States Bureau of the Budget, as of March, 1965, had recognized 10 additional SMSA's so that, in terms of current areas, there are at least 222 SMSA's at the present time. These 222 SMSA's are estimated to contain 65 percent of our total resident population. This 65 percent includes, of course, the population of areas added to the 1960 areas of the earlier 212 SMSA's.

The pattern of little or no growth in central cities and rapid expansion in the suburbs has also continued. Of the estimated increase of 13 million in metropolitan population between 1960 and 1965, only 2.6 million was in central cities. For the first time, the population of central cities dropped below 50 percent of the total metropolitan population; in 1965, it is estimated to have been about 48 percent of the total; in 1960, it was 51.4 percent.

Similarly, there has apparently been a continuation of the changing relative importance of the various sizes of SMSA's within the SMSA family.

Estimates of the population of 55 large SMSA's (1964 area) indicate a further decline in the relative importance of SMSA's with less than 500,000 persons. In 1960, they contained about 28.3 percent of the SMSA population but, according to the available estimates, 27.7 percent represents a maximum for 1964. (For these groups, net losses through "sliding up the size scale" cannot be determined from the data.) The details for the size classes for areas with 500,000 or more inhabitants are indicative, but unfortunately not definitive. They indicate declines in importance for the "3,000,000 or more" and for the "500,000 to 1,000,000" groups. For the latter, of a half dozen or so areas which were within striking distance of the 500,000 level, only Toledo appears in the Census estimates for 1964. Had a complete survey indicated that two or three additional areas had entered the "500,000 to 1,000,000" group an increase, rather than a decline, in the relative importance of the group might have appeared. For the "3,000,000 or more" group, San Francisco is a borderline case--the transfer of Solano County (1964 population of 155,000) to another SMSA preventing its crossing the line into that group.

Growth rates by size of area and by region continued the earlier patterns. Of the three size groups for which data are available for the four-year 1960-64 period, the growth rate was least, 6.4 percent, for the "3,000,000 or more" and greatest, 8.9 percent, for the "500,000 to 1,000,000" size class. And, comparison with the Census estimates for all (212) SMSA's over the 1960-65 period indicates that the rates for the smaller size groups must have been lower than 8.9 percent, again conforming to the 1950-60 pattern.

The earlier pattern of regional differences in growth rates was also continued, i.e., rates increasing in the North--South--West order. This was true within each of the three size groups for which the data are available (a point not immediately verifiable for 1950 and 1960 since tabulations "by size by region" were not published by the Bureau of the Census). SMSA's of intermediate size in the West--500,000 to 1,000,000 persons--had the greatest growth rate, 19.0 percent. At the other extreme was the "1,000,000 to 3,000,000" group in the North 3.3 percent.

Metropolitan Population: Projections

The fundamental forces at work may be expected to continue to operate over the next couple of decades with the expectation of further growth of urban and metropolitan populations. They will account for greater proportions of the total in 1970 than in 1965 and in 1980 than in 1970.

Projections to 1980 for all metropolitan areas are based upon a continuation of past trends. They show an increase of about 45 million in the metropolitan population between 1965 and 1980 on the "same class" basis. Such an increase would represent a number equal to about 95 percent of the projected increase of 47.3 million in total population, and would result in more than 70 percent of the population being in metropolitan areas in 1980.

Suburbs have been growing more rapidly than central cities because of the impact of 20th-century technology and the relatively fixed boundaries of central cities. While technology was developing, the boundaries of central cities remained relatively fixed despite annexations. On the average, the central city in the United States has been filled since the 1920's. Since central cities became filled within their relatively fixed boundaries, continued growth could take place only in suburbia, beyond the borders of the city.

The forces accounting for the differential in the growth of suburbs and central cities may be expected to continue operating during the next decade or two. Of the projected increase of 45 million in the population of metropolitan areas between 1965 and 1980, about 36 million is projected for absorption by suburbia. By 1980, of some 170 million people in metropolitan areas, about 100 million are projected to be in suburbs, about 70 million in central cities.

The spatial patterning of the physical residential plant of our metroplitan areas, with its correlative socio-economic stratification of the population, is likely to be drastically modified. It is possible that, while the obsolescent inner areas are replaced or renovated, decay will occur in the suburban rings. With increased intervention and urban renewal programs, it is likely that the physical and socio-economic character of a community in the future will depend less upon the historical accident of its origin and more upon the will of organized population groups as manifest in their planning and development activities.

It is also possible that, in the decades to come, an emergent pattern of residence within the metropolitan area may become the modal one. There is increasing evidence that, in accordance with the family cycle, the family is tending toward a corresponding use of the metropolitan area. As children come, their families tend to move to the outlying suburban area in order to place them in surroundings of green lawns and open spaces. As the last youngster departs for college or gets married to start his own family, the parents show a tendency to move back to a rebuilt or renovated inner zone of the metroplitan area.

City and Country Population

SMSA's are defined to obtain as close a representation of the actual realities of our larger population agglomerations as possible; in contrast, urban territory is defined largely upon the basis of the existence of a charter granted by a State legislature for a relatively small area with 2,500 or more persons. (This applies even though the definition was modified in 1950 to include urban-fringes around cities of 50,000 or more and unincorporated places of 2,500 or more.) Most of the inhabitants of SMSA's are also in urban territory. But substantial numbers (25.7 million) reside in places of fewer than 50,000 inhabitants which are within urban territory but outside SMSA's. In addition, rural territory, with a total population of 13.3 million persons, lies within SMSA's. Hence, though the overlap is large, each basis of assembling data provides some information about population which the other does not.

Urban

The number of cities climbing the size ladder during the fifties was far and above the number necessary to offset the downhill slides of some cities. Oldplaces expanded into higher size classes, new places were formed, and there were some new arrivals from rural territory. The total number of places with 2,500 or more inhabitants increased from 4,300 in 1950 to 5,400 in 1960. Except for the largest size class, cities of 1,000,000 or more inhabitants, every size class showed an increase in the number of places. Cities of 50,000 or more inhabitants, each of metropolitan size, increased in number from 233 to 333. The net upward movement was facilitated by the long-used American procedure of expansion and annexation. The extent to which this growth occurred is illustrated by California, where 188 of at most 212 incorporated places of 2,500 or more inhabitants in 1950 annexed territory during the decade.[14]

The relative importance of the various size groups within urban territory changed during the decade. It was the cities of intermediate size, populations between 10,000 and 100,000 inhabitants, which increased in relative importance. They contained less than 31 percent in 1960. Most of this growth was at the expense of our larger cities, particularly those with populations of 1,000,000 or more inhabitants. In large part, this change reflects the rapid growth of suburbs, i.e., of places really metropolitan in character by virtue of contiguity with large cities, while the larger cities, the central cities, were growing slowly, if at all. Finally, it may be noted, the smaller places, with populations of fewer than 10,000 persons, and "other urban" territory also declined slightly in importance during the decade.

In relation to the total population of the United States, it was the intermediate-size cities which increased in relative importance. They contained less than 20 percent of the total population in 1950, but almost 26 percent in 1960, and accounted for all the net increase in relative importance of urban territory. The larger cities declined slightly, and the smaller cities increased slightly in relative importance during the decade.

Rural and Farm

Until 1950, our rural population increased decade by decade, but, in general, at a declining rate. During the fifties, rural population actually declined; all of the overall population increase of 28 million and the 400,000 decline in rural territory was absorbed in urban territory.

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[14] U. S. Bureau of the Census, Op. Cit., Vol. I. Pt. 6, Tables 3 and 9. The figure "212" is for all urban places and may include some unincorporated places.

Just as important as the absence of population growth in rural territory during the fifties was the shift of population from rural-farm to rural non-farm areas. Except for the depression thirties, the rural-farm population has been declining since 1910 when the first rural-farm Census count was made. In the forties, fifties and, thus far, in the sixties, the decline was sharp. Farm population decreased from about 30 million in 1940 to about 23 million in 1950, to about 16 million in 1960 and then to about 12 million in 1965.[15]

This decline has been stated in terms of the new definition of "farm population" introduced in 1960, using the Department of Agriculture 1941 estimate for 1940. Despite the change in definition, it is probably correct to say that the farm population of 32 million in 1910 decreased to 12 million in 1965. This conclusion is justified because the persons residing on "farms" without actually producing farm products, a group excluded from the 1960 definition, increased greatly between 1910 and 1960. Within rural territory there has been a major decline of persons living on farms who are directly dependent upon agricultural production for their livelihood. To some extent the decline in farm population may be the result of the development of "town" residence and "farm" work. In the main, however, the decline in rural-farm population reflects the increased mechanization and productivity of American agriculture. Acreage under cultivation throughout the entire period of decline of farm population has changed little, whereas productivity per acre has continued to increase greatly.

It may also be noted that during the fifties the districution of rural population among "places" and "open territory" changed hardly at all. Furthermore, the number of places showed a net decline of little significance. Undoubtedly, some places moved from the rural to the urban classification during the fifties, while new places were born in rural territory.

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[15] U. S. Department of Agriculture, Economic Research Service, Farm Population, Estimates for 1910-62. ERS-130 (October 1963).

Projections

By 1980, between 75 and 80 percent of our population may live in urban territory, which would place almost as many persons in urban territory in 1980 as there are in the entire United States today. This figure contrasts with about 64 percent in 1950 and almost 70 percent in 1960. Even so, it leaves room for a modest increase in rural population within the projected total increase.

Farm population may be expected to decline further in view of mechanization developments and productivity increases. By 1980, the farm population is likely to be fewer than 10 million persons.

Government Structure

In dealing with community services, the urban population approach, based on cities and legal entities, is more appropriate than the SMSA population approach. Such services tend to be organized, financed and administered by individual government units rather than on an SMSA-wide basis. The mere number of governmental units is staggering--still over 90,000 in 1962 after a decline from over 100,000 in 1957. About one-third of these are school districts (which have declined in number) and another 18 000 are special districts (which have indecreased in number). Municipalities number about 18 thousand. Data from the 1962 Census of Governments[16] are as follows:

Governmental Unit	Number
Local governments, except school districts	56,508
Counties	3,043
Municipalities	18,000
Townships	17,142
Special districts	18,323
School districts	34,678
Other public school systems	2,341

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[16] As reported in U.S. Bureau of the Census, Statistical Abstract of the United States: 1965. (86th ed.) (Washington, D.C.: 1965), Table 565.

The disparity between the legal entities (cities) and the population entities (SMSA's) poses problems for public agencies concerned with providing services to metropolitan populations. To serve well at low cost, an agency must make full use of the economies of large--scale operation. But this is not feasible with a large number of small purchasing units (i.e., the relatively small governmental units). They act so as to limit agency size and the provision of integrated and unified services. This is true not only in rural, farm and small-town areas but also within our large metropolitan areas.

With the continuation of extension urbanization and metropolitanization during the next few decades will come increased recognition that our 20th century technological, economic and demographic units have governmental structures of 18th- and 19th-century origin and design. Already there is a discernible trend toward changes in local government units to meet area-wide problems more adequately. Increasing numbers of elections have been held to consolidate city and county governments; in increasing numbers, special units have been created to deal with specific functions such as sanitation, drainage, water supply and port facilities. It is certain that in the next decade or two, area-wide planning and functional governmental units will emerge at an accelerated pace. The sharp increase in the number of special districts and the sharp decline in the number of school districts between 1957 and 1962 shows, in sharp relief, the lines of recent and future development.

Racial and Ethnic Composition

Throughout the history of the United States, its population has been relatively heterogeneous in its racial and ethnic composition. At the beginning, there were various European stocks and the native Indians. The infusion of African population during the 18th and 19th centuries was followed by a wave of immigration of various European stocks during the 19th and early 20th centuries. Between 1820 and 1964, the Federal government managed to count about 43 million immigrants who came to the United States.[17] They came in large waves during the 19th and early 20th centuries. In mid-19th century, streams of Irish and German immigrants followed upon the potato famine and economic difficulties in Ireland and upon the abortive revolutionary attempt of 1848 in Germany. Toward the end of the 19th century, crop failures and general economic depression set in motion relatively large volumes of Scandinavian immigrants. During the early part of the 20th century, sources of immigration to the United States shifted from Northern and Western to Southern and Eastern Europe--to Russians and Poles, including the Jewish groups, to Italians, Greeks, and other peoples from Eastern European nations, who left their homelands for the new opportunities beckoning in the rapidly developing United States.

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[17] Immigration and Naturalization Service, U.S. Department of Justice, as reported in U.S. Bureau of the Census, Statistical Abstract of the United States: 1965. (86th ed.) (Washington D.C.: 1965), Table 117.

Rapidity of population growth and relative youth make the United States one of the more heterogeneous nations on the face of the earth, one which, in large measure, has yet to achieve unification or integration. As recently as 1950, for example, over a fifth of the population of the United States was either foreign-born or native-born of foreign or mixed parentage; and over a tenth were of nonwhite race. Even as late as 1960, only 70 percent of the population of the United States was native-white. Moreover, as recently as 1950, in four of our five largest cities, the native white population of native parentage constituted less than half of the total, ranging from 34 to 46 percent. Los Angeles was the only city among the five largest in the United States in which the native white population of native parentage was greater than half, and even there it was only 55 percent. The first generation in which virtually all the people of the United States share a common nativity is yet to come.

Large scale internal migration--the mechanism, in the main, by which population and opportunity are equated--within the United States has facilitated the acculturation both of immigrants and of diverse native born groups. In the 19th and early 20th century, migratory flows were generally westward, with the racial and ethnic characteristics of participants varying from time to time. To this general inter-regional westward movement, have been added, since about 1940, major migratory flows into rapidly growing metropolitan areas and from farm to city.

The size of the foreign-born population depends, of course, upon the aging and mortality of the foreign-born already here and upon the volume of net immigration. In 1960, the foreign-born population was 5.4 percent of the total United States population; the foreign-born whites, 5.2 percent.[18] Despite heavy immigration, the foreign-born white population never exceeded 15 percent of the total--only in 1890 and in 1910 did it approach 15 percent. The subsequent decline was assured by the immigration exclusion acts of the 1920's and later dates. Continuation of these policies in the decades ahead assures a further decline in the proportion of foreign-born. However, the number of foreign-born will remain about the same--about 10 million--under the assumption underlying the population projections presented in this paper, i.e., that net immigration will be about 400,000 per year.

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[18] U. S. Bureau of the Census, Census of Population: 1960, Vol. I, Pt. 1, Table 66.

As the foreign-born have declined both in relative importance and in number during recent decades, the nonwhite population, approximately 95 percent negro, has not. From 10.2 percent of the total in 1930, the nonwhite population gradually increased to 11.4 percent in 1960. However, this small difference in the proportion of nonwhites reflects a large difference between the white and nonwhite growth rates. Thus, during the fifties, the nonwhite growth rate was 26.7 percent; the white, 17.5 percent. Continuation of such a difference in growth rates Would lead to a nonwhite population in 1980 approaching 13 percent of the total population. And, with a continuation of recent and prospective patterns of concentration, large proportions would reside in the central cities of the large SMSA's.

Along with the recent explosive growth of the nonwhite population, there have been massive and important changes in the location of the population. One facet of this growth has been the migratory flow of the Negroes from the South to the remainder of the country. This trend, started during World War I, has continued ever since, except for substantial diminution during the depression thirties. About 89 percent of the Negroes were in the South in 1910; by 1950, only about two-thirds were in the South; and by 1960, less than 60 percent. This decline may be expected to continue; and, as early as 1970, it is possible that as many Negroes may be in the North and West as in the South.

A second facet has been the increasing urbanization and metropolitanization of Negroes in the South as well as elsewhere. In 1910, before the flow of Negroes to the North and to urban places began, only 27 percent lived in urban places as defined by the Census (places of 2,500 inhabitants or more). By 1950, over 90 percent of the Negroes in the North and the

West and 48 percent of those in the South lived in cities.

By 1960 (the latest date for which data are available), 58 percent of Negroes in the South live in urban places; in the North and West, it was 95 percent. Further, almost 38 percent of the Negroes resided in the 24 largest SMSA's which include our 24 largest cities; and almost 65 percent, in 1960, resided in the 212 SMSA's as of 1960.

A third facet has been the settling of the Negro in the central cities of SMSA's containing the 24 largest cities, central-city Negro population numbered 83 percent of all Negroes in those SMSA's. As the Negroes moved into the inner zones, the whites moved outward. Since the Negro population concentrated in relatively few areas within central cities, there was, in those areas, a large increase in population density.

There is evidence that in some respects the pathway followed by the immigrant groups in acquiring a place to live and economic and social status in the community is being followed by the Negro. The limited evidence that is available indicates that the Negro is climbing the social and economic ladder as measured by education, occupation and imcome. The evidence also indicates that he is moving outward from the inner zones of the city, which constituted his port of entry and, in fact, is beginning to knock at the door of the suburb. The most important respect in which Negro accommodation to his new environment differs from that of the immigrant is to be seen thus far in the continuation of the pattern of segregated residence. Although the time span involved is still a brief one, the evidence indicates increased rather than decreased segregation of the Negro within the cities.

The impact of the expansion, relocation and acculturation of the Negro population has been and will continue to be a major one. It cannot be predicted with accuracy, but will certainly be much greater than increases in numbers alone might indicate.

Age Structure

Perhaps the most important single characteristic of a person is age. Activities of individuals change with the stage of the human life cycle, from infancy to retirement and eventual death. Each stage generates its own distinctive activities and demands.

In 1800, the "average" American was only 16 years old; in 1950, he was over 30. As late as the third quarter of the 19th century, over 40 percent of the population was under 15 years of age and only 4 percent, 60 years of age or more. Such an age structure is much like that of the underdeveloped areas of the world today. By 1950, however, the proportion of persons under 15 had declined to 27 percent, and those 60 and over had increased to 12 percent. Thus, by 1950, the United States had become "aged" on the basis of the United Nations classifications of nations by age.

Age changes of such magnitude and depth have significantly affected the character of American society. The usual Census presentation by 5-year intervals has been modified (by interpolation, when necessary, in the absence of detailed data) to show separately the various school age groups. Perhaps the most striking feature of the data is found in the decreased median age of the population. From the moment of birth a person can only age. But a population may, over time, either age or grow younger. The explosive birth rates of the late forties and the fifties decreased the median age for the first time in the history of the United States, from 30.2 years in 1950 to 29.5 years in 1960, and then to 27.2 in 1965.

1950 to 1965

Even more significant than this decline in median age is the great variation in the perdent of change during the decade and one-half ending in 1965 among the specific age groups. Thus, the number of children 10 and 11 years of age increased by over 70 percent. At the other extreme, the number of persons 25 to 34 years of age actually decreased; the number 25 to 29 years of age decreased in number by almost 9 percent during the decade and one-half.

These large differences between the growth rates of age groups were largely the result of fluctuations in birth rates. For example, the baby crop of the depression thirties, when birth rates were at all time lows, generated the 25 to 34 year olds of 1965; the baby crop of the prosperous twenties, when birth rates were much higher, generated the 20 to 29 year olds of 1950. The effect of the decline of birth rates was great enough to result in a decline in the number of 25 to 34 year olds between 1950 and 1965, despite the larger child-bearing population and despite the lower mortality rates in the depression thirties. By contrast, the effect of the postwar rise in birth rates was sufficient to result in the "under 20" population expanding most rapidly during the 1950-65 period.

With regard to those persons 35 years of age and over, the declining birth rates of much earlier decades were, of course, important. But the counter-directional effects of the long-term mortality decline and the prior increase of the child-bearing population were sufficient to maintain growth at a rate close to the overall 28.1 percent increase from 1950 to 1965. In the case of the senior citizens, those 65 years of age and over, the increase in numbers was almost 35 percent during the decade and one-half. Thus, although the population of the United States grew younger during the period, as measured by median age, it also grew older as measured by the increase in the proportion of persons 65 years of age and over. This continuation of the "aging" trend over the decades brought the number of senior citizens to 9.4 percent of the total in 1965.

The decade of the fifties was, in a unique way, the decade of the elementary school child. The number of youngsters 5 to 13 years of age increased by 45 percent, as contrasted with less than 9 percent during the forties. To a lesser extent, it was also a decade for the high school group, which increased by 35 percent. For this group--those 14 to 17 years of age--the first-half of the sixties has been its half-decade. From 1960 to 1965, they increased in number by 24 percent in contrast to about 10.8 percent for the elementary school children. To this boom in numbers, perhaps, should be attributed a substantial share of the problems of our teenagers.

Curiously enough, it was also a boom decade and one-half for our senior citizen group so that both ends of our age structure increased more rapidly than the intermediate sector. Those 18 to 65 years of age, who include almost all of the working population of the country, increased by only 14 percent. As already noted some young adult groups actually declined in numbers.

Projections to 1980

The projected rates of growth and expansions in numbers vary widely among the age groups. Between 1965 and 1980, the population 65 years of age and over will increase by some 5 million persons or by 27 percent. Since everyone who will be 65 years of age or over by

1980 has already been born, this projection can be accepted as quite accurate; uncertainty of birth rates is not a factor, and uncertainty of mortality and migration is of minor importance.

Increases for those 65 years of age and over will be at varying rates among various localities. Elderly persons have been migrating to places in the West and South with special climatic conditions, for example, to Florida, California and Arizona. This movement may be expected to continue during the sixties and seventies. It may also be noted that the senior citizens of 1980 will have attained higher levels of education and will have more leisure time than their counterparts of earlier dates.

Like the senior citizens of 1980, those who will be from 35 to 64 years of age in 1980 are already here; thus, the projections for them are quite reliable. The rate of increase for the group 35 to 64 years of age, however, will be much smaller, only about 1 percent. This percentage represents an increase of only 5 million, less than that for our senior citizens. This broad group is composed almost entirely of active members of the labor force and persons well along in the course of marriage and parenthood.

A really explosive expansion in number will occur for the group 18 to 34 years of age. The increase will be 57 percent. In terms of numbers, it is an increase of almost 24 million persons just over one-half of the projected 47 million overall increase in population. This group includes college students, new entrants to the labor force, newlyweds and young parents. Hence, the large projected increase for them is a warning signal of possibilities of a swamping of college and university facilities, a rise in unemployment while jobs also increase, and a large increase in the number of births.

The group which will be 14 to 17 years of age in 1980 are the births of 1962 to 1966. Practically all of them are here to be counted. and for the most part, they appear in the statistics now available. Hence, the projections for them are reliable, though not quite as reliable as those for age groups of 18 years or above. For them, an increase of almost 17 percent is projected (1965 to 1980), about 2.4 million teenagers. This is very small compared with the 67 percent or 5.7 million increase during the preceding 15-year period. Perhaps, as a result, an era of teenage problems will pass.

The major uncertainty for the group 5 to 13 years of age, the elementary school age group, is, of course, the birth rate during the years 1966 to 1975. Current birth rates are already well below the highs of the late fifties, but they may rise again, especially should international tension lessen and high levels of economic activity continue. On the other hand, the decline in birth rates could be greater than that assumed. In fact, important developments affecting the birth rate, but for which we have no guides in previous experience, have not yet been adequately assessed. On the conservative basis of projection used here, an increase of only 4 million or about 11 percent may be expected in the groups 5 to 13 years of age. Such an increase is in sharp contrast to the increase of 61 percent or 13.5 million children in the preceding 15-year period. Our schools and markets, we may feel certain, will feel no impact such as occurred during the later period as a result of the postwar baby boom.

Implications For Education

Enrollment in Schools

School enrollment depends on the number of persons in the various school-age groups and on their enrollment rates. As the American income level has increased, greater educational opportunities have been offered to and accepted by our younger citizens.

At least since 1910, school enrollment rates have increased. For the traditional elementary school age aroups, they had come close to a practical maximum by 1950. Even as early as 1910, roughly 86 percent (and probably more) of the youngsters 7 to 13 years of age were enrolled in school;[19] by 1950, the enrollment rate was approaching 99 percent, and by 1960, almost every one of them was enrolled (over 99.5 percent). A small drop-off has occurred since then, but this appears to be a result of transient factors, perhaps only a lag in the provision of adequate facilities for our burgeoning population of 7 to 13 year olds. And, enrollment rates for our 6 year old children are not far behind. When enrollment in kindergarten is included, they are now over 98 percent, after a steady rise from roughly 52 percent (and probably more) in 1910. Even more than two-thirds of our 5-year olds are now enrolled, after a dramatic rise since 1940 when the rate of roughly 18 percent differed little from that of 1910. The bulk of these (perhaps 85 percent) are, of course, kindergarten children. Finally, it may be noted that the Bureau of the Census has recently[20] started to collect information on the school enrollment of 3- and 4-year olds; this indicates that what used to be relatively rare may have started on the road to becoming commonplace. For the 3- to 5-year olds, the enrollment rise represents a change in our cultural pattern during the past half-century or so. Kindergarten is widely recognized as a standard beginning grade for public schools. There is a growing willingness to register precocious children who have not yet reached their 5th birthday. Nursery schools are becoming phenomena of the middle-income as well as upper-income groups, and are now being urged for low income and poverty groups.

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[19] U. S. Bureau of the Census, Census of Population: 1960. Vol. I, Pt. L, Table 167.

For our children under 14, full exposure to schooling is in sight, that is, in terms of enrollment. But this is not enough. There remain two acute and important problems, even for these groups. First, less than maximum enrollment is concentrated in small pockets of discrimination or poverty or both. Second, the quality of schooling is far below reasonable standards in a number of places and expecially in city-slums and poverty stricken rural areas.

For the group 14 to 17 years of age, we are still far from achieving full exposure to a high school level of education. Despite a steadv rise from roughly 43 percent in 1910, the school enrollment rate for those 16 and 17 years of age is still less than 88 percent. For those 14 and 15 years of age, the rate, after a steady rise from roughly 75 percent in 1910, is almost as high as the rate for the group 7 to 13 years of age. This gap between the younger and older high school ages indicates the minimum extent to which children are not completing a high school education--the magnitude of the drop-outs. It is a minimum since the enrollment rate for those 17 is less than for those 16 and for those 18 less than for those 17 years of age. As in the case of the younger children, less than maximum enrollment rates are concentrated in particular areas and among particular groups. For example, in non-metropolitan areas, 85 percent of the white children 16 and 17 years of age are enrolled in school, but only 78 percent of the Negro children; similarly, in metropolitan areas the corresponding rates are 90 and 87 percent.[21]

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[20] U. S. Bureau of the Census, Current Population Reports Series P-20, No. 148 (February 8, 1966), Table E.

For those 18 years old and above, enrollment rates are much lower, reflecting the fact that college and post-graduate education is obtained by relatively few. But for these age groups, there has been a sharp increase in enrollment rates since 1950, extending earlier advances. This reflects not only greater participation in collegiate education particularly at the community college level, but also improved participation at the high school level. In connection with the latter, it may be noted that, of those 18 years of age who are enrolled in school, perhaps as many as 60 percent are in high school--the Census figure for 1960, the most recent year for which one is available.[22]

The most visible consequence of the changing age structure during the fifties was the tremendous pressure on kindergarten and elementary school facilities. The grade schools of the United States were inundated by the tidal wave of postwar babies who reached school-entrance age and filled the schools in the fifties and this continued into the sixties. Enrollment in kindergartens and elementary schools increased by 11 million children in the fifties and then another 3 million in the first half of the sixties, the total rise for the 15 year period running to 64 percent. This rise was somewhat more than the 61 percent increase for youngsters 5 to 13 years of age, the difference representing in part the increase in enrollment rates during the decade.

During the sixties and seventies, the pressure on the grade schools will all but disappear. Between 1965 and 1980, enrollment may increase by over 4 million or by only 12 percent. This is approximately an average of 1 percent per annum, an easily managed rate. The major problems, therefore, will not be those of rapidly achieving net increases in total quantities of facilities and personnel. Rather, emphasis will be upon the relocation, improvement and replacement of physical facilities, upon the improvement of personnel and upon the innovation and development of materials and techniques.

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[21] Ibid., Table H.

[22] U. S. Bureau of the Census, Census of Population: 1960. Vol. I, Pt. 1, Table 167.

Developments parallel to those in the elementary schools occurred in the high schools during the fifties and early sixties, only relatively larger. Between 1950 and 1965, high school enrollment almost doubled, rising from 6.7 million to 13 million. And like the elementary schools this was above--considerably above--the 67 percent increase of the high school age population and the difference represented, in large part, the rise of enrollment rates. Unlike the elementary schools, however, the high schools still have a few more years of rather rapid enrollment increases (about 13 percent between 1965 and 1970) before relief arrives in the form of little or no enrollment increase.

An explosive increase in enrollment of almost 60 percent occurred in our colleges and professional schools during the first half of the sixties. This followed on the heels of a less explosive increase of 61 percent in the fifties. Enrollment went from 2.2 million in 1950 to 5.7 million in 1965--an increase of 156 percent. Only in part does this represent an increase in the college age groups, the groups 18 to 21 years of age which increased by only 34 percent. In crude terms, the only ones available, about 80 percent of the explosive 1950-1965 increase in college and professional education has been the result of much greater rates of enrollment of the college age groups in institutions of higher education. A very large further increase of almost 3.5 million or 61 percent in enrollment is projected by 1980. However, current college enrollments have been swelled by the Selective Service policy of student deferments. Should this policy be modified, the enrollment expansion may be slowed though the longer-term trend will continue up at a rapid rate. Offsetting this, and also perhaps underestimated by the projections is the growing recognition of the need and the growing demand for community colleges.

In overall summary, school enrollment in 1980 is projected as about 64 million persons. This represents an increase of about 10 million persons, or about 18 percent, above the number enrolled in 1965. Both in number and in rate of increase, the change will be far less than from 1950 to 1965, when school enrollment increased 23.5 million persons or about 78 percent.

Educational Attainment

In 1940, the first year for which census data on years of schooling were collected, the "average" person 25 years of age and over in the United States had completed little more than an elementary school education, i.e., about 8.6 years of school. By 1950, median years of schooling had risen to 9.3; by 1960, to 10.6; and, by 1965, it is estimated, to a level approaching a high school education. This reflects the long term effects of rising enrollment rates beginning in the early part of the century. With a continuation of recent trends in educational improvement, a significant milestone will have been passed as the next decade is ushered in. Projections, and the conservative ones at that, indicate that, by 1970, the "average" American 25 years of age and over may have achieved a high school education; and, by 1980, median years of schooling will have risen further to 12.2 years. For those 25 to 29 years of age, and even higher level of attainment is projected. This, in turn, presages a continued rise in educational attainment to 1980 and beyond. Part of the rise in our educational level has been the reduction of the proportion of persons with little or no schooling. In 1940, about 13.6 percent of the population 25 years of age and over had fewer than 5 years of schooling, a level below that of functional illiteracy. In 1950, 11.1 percent were still in the group. By 1965, however, the proportion of functionally illiterate had declined to about 7.1 percent. Should the trend continue, the proportion will decline further to less than 4 percent in 1980.

With the effects of the rise in educational level added to the effects of increases in population, the numbers of high school and college graduates expanded. Since the expectations are for both factors to continue to rise, further increases in the numbers of such graduates are projected for the balance of the sixties and seventies.

In the adult population 25 years of age and over--all well beyond the age at which completion of our mass education high school programs is typically scheduled--the number of high school graduates increased by about 17 million persons, from 29.2 (conterminous U. S. only) to 46.6 (all U. S.) or by almost 60 percent during the decade and one-half from 1950 to 1965. In 1950, the high school graduates numbered 34 percent of all those in the "25 and over" age group; in 1965, the percentage was almost 45 percent. Sometime during the seventies, the high school graduates 25 years of age and over will pass a number equal to 50 percent of the corresponding total population. And, by 1980, the number may well approach 60 percent of the total. Between 1965 and 1980, a 28 million increase in the number of high school graduates (age 25 and over) is projected to bring the total to almost 75 million, an increase of about 60 percent, about the same as during the preceding 15 years.

For the college graduate group among the "25 years old and over" adults expansion of 73.3 percent, from 5.3 to 9.2 million, was at a greater rate than the high school group during the decade and one-half, 1950-1965. This difference in rate is projected to increase for the 1965 to 1980 period; the college graduate group is expected to increase by about 81 percent while the high school group will grow about 60 percent. By 1980, the number of college graduates in the adult "25 and over" population is projected to exceed 16 million. This figure would equal almost 13 percent of the total number of persons in the "25 and over" age group, i.e., the number well beyond the typical age of completion of a college education.

Problems for Education

The great population changes in prospect and in the past pose many problems for education, vocational and technical education included. Massive increases in the school-age population and in school enrollment have already had both salutary and deleterious consequences. On the adverse side, bulging enrollments have operated to depreciate the quality of education. There can be no question of this; it has not been possible to expand school facilities and teacher personnel at rates sufficiently large to match the increases in population and school enrollment. And, it may be observed, secondary and higher education has still to suffer the most serious effects upon its quality. On the positive side, rising enrollment rates over the years, together with the more recent growth in school-age populations, have produced and will continue to produce an adult population with rising levels of educational attainment, at least as measured by formal years of schooling.

Throughout the nation, school facilities have become strained as a result of the very large enrollment increases. In urban and metropolitan areas, however, this problem has become especially acute; schools have been faced with the consequences of marked changes in the composition of population as well as with those of large population increases. A disproportionate burden has been placed upon urban and metropolitan schools by the large scale movement of population to metropolitan areas; they have been subject to population implosions as well as population explosions.

The burdens bave been especially great for central city and "inner core" schools because of the mass in-migrantion of relatively "culturally deprived" persons, both white and Negro. Suburbs, as well as central cities, have been faced with grave problems of expansion of school facilities and personnel. But, in the central cities there have been, not only problems arising from large increases in numbers, but also the more complex problems arising from increasing proportions of students with "culturally deprived" backgrounds. Some measure of the magnitude of the latter problems is afforded by the large increases in the nonwhite population of central cities.

In recent years, the traditional orientation of our schools has come under sharp criticism. Elementary and secondary schools have traditionally been academically oriented; at the same time, vocational and technical schools have been traditionally developed separately from other schools. Criticism of this has been generated by such factors as 1) the increasing number of dropouts, 2) the high unemployment rates for youths, 3) rising obsolescence rates for industrial equipment and human skills, and (4 the patent failures of the schools to transmit basic skills, saleable skills and citizenship skills to our "culturally deprived" or, more appropriately, to our "opportunity deprived" citizens.

There is a great need for re-examination and re-evaluation of our schools, vocational and educational as well as academic, in ghe light of their time-honored mission in the United States. Public education in a free society is properly concerned primarily with the individual, with his intellectual development, the cultivation of his skills, his vocational and professional preparation, the nurturing of his artistic sensitivities and creativity, the discipline of his moral will, his achievement of a genuine sense of personal worth and meaning in existence, and his commitment to high purpose.

It is inevitable, therefore, that decisions importantly affecting the character and quality of the schools, whether in matters of instruction, personnel, administration, or social behavior and relationships, must make a difference not only in the lives of the individual students but, also, in those sure but subtle ways by which influences permeate the social structure, in the whole life of the society and in its culture. The purpose of our schools is nothing less than the achievement of free persons in a free society.

Public education has contributed in a major way to the moulding of this nation. It has been the chief instrumentality by means of which the United States has achieved unity out of her diversity of ethnic and racial stocks and an open society permitting unparalleled lateral and vertical social mobility. Education has been a major factor in the "Americanization" of successive streams of immigrants and in providing individuals with the opportunity, no matter how humble their origin, to rise to whatever social, economic, and political heights their individual capacities permitted.

But the fact is that, at the present time, schools in America are failing to fulfill their historic mission. By reason of the rapid social, technological, and demographic changes generated by World War II and its aftermath, our schools have become stratified in quality and divided in objectives; and they threaten to produce a class and race stratified society. It is incontestable that we have different qualities of education and that we therefore provide widely varying levels of opportunities through schooling for the suburban child, the city child, the Negro and the white child in the inner city, and the rural child. There is great need to attain equality of opportunity for education for all children. Equality of opportunity for education will not exist in fact until every child in the nation has easy access to public schools adequately equipped to provide an instructional setting and exposure that would enable each child to develop his full potential for education. That is, more specifically, each child should have equal opportunity to acquire the basic skills of the "three R's," the saleable skills that assure economic independence, and the civic and social skills that enable him to assume the full obligations as well as rights of American citizenship. Not until every child does have equal opportunity for acquisition of basic skills, saleable skills and civic and social skills can it be said that America is providing her children with the basic equipment to become free persons in a free society.

The failure of the schools to provide equality of opportunity to all American citizens is highlighted by three basic facts. The first is the fact that today the overwhelming majority of American school children, more than 90 percent, are educated in segregated schools--schools that are all white or all Negro. The second is the fact that the segregated Negro schools, by available criteria, are inferior in quality to white schools. The third is the fact that segregated schools, both white and Negro, provide inferior education by definition, for they fail to prepare their pupils for life in our pluralistic democratic society and in the ever shrinking pluralistic world.

Towards the Solution of the Problems

Discussion over the past several years has generated many proposals for the modification of the schools, academic and vocational. Although many of these proposals have had their origin in efforts to deal with the disadvantaged child, and especially the disadvantaged Negro child, their implications extend to all of the educational system--public, private and church-related. Perhaps the most comprehensive and drastic proposals yet set forth are those contained in the forthcoming report of The White House Conference, "To Fulfill These Rights," held in Washington, D.C. on June 1 and 2 of 1966.

In summary, the White House Conference states three national goals with respect to general education as follows:

1. To achieve equality of educational opportunity,
2. To reduce racial concentration in the schools--of students, teachers and other school personnel,
3. To improve the quality of education.

Experience has demonstrated that these goals cannot be achieved without increased participation of the Federal government. State and local governments have defaulted in their obligations to education and have widely varying resources and levels of educational support. Moreover, the problems which confront education today are of grave national concern, affecting as they do the quality of the entire population and the future of the nation.

To effect equality of opportunity for education and to improve its quality, there must be both 1) an increase in the funds available and 2) a better distribution of funds for educational purposes along and within the states. It must also become national policy to reduce racial concentration inthe schools in the North and West as well as in the South.

A number of specific recommendations are made in the White House Conference report which need not be reported here; they point the way to the resolution of the grave problems which face education now and will continue to do so for some decades to come. Included are a number of recommendations relating to the strengthening of vocational and technical education. It is recognized that vocational education has failed to keep pace with the rapid changes in technology and goals; and it has not adequately effected the badly needed coordination of efforts of the schools, industry and labor. There is need to consider the possibility of achieving a better integration of vocational and academic education, perhaps in the context of an "education park" designed to solve a number of problems simultaneously.

Concluding Observation

Since World War II, schools have been called upon to make drastic adjustments both the increased enrollment and to new educational requirements. The population explosion, the population implosion, and the changing population composition--especially in the central cities or metropolitan areas--have combined to present the schools with unprecedented challenges. It is patently clear that these problems will not automatically disappear, and that they pose a challenge which will continue to be the priority task of the schools for some time to come.

CHAPTER III

PROJECTIONS OF CHANGING STUDENT POPULATION

Eugene P. McLoone*

McLoone indicates that the educational decision-making structure in this country is changing, this change is influenced by the nature of the numerous needs of the many and varied societies education serves. He shows that many groups other than educators are determining who can decide.

In making his projection, the author reviews some of the social forces which influence the schools, e.g., increased governmental spending for education, and increasing influence of educational suppliers in decision-making, and he outlines some of these forces in the following article.

Introduction

> "If youth constituted the key to the future, the most direct, rewarding and important investment in our children and youth," as the President once put it, "is education." Education was essential to employment in a high-technology society where among the unemployed 40 percent had eight years of schooling or less (and where only 1 4 had college training.) More than that education was essential to the fulfillment of talented individuals. As the war generation of babies now pressed upon the colleges with their younger brothers and

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> sisters beginning to crowd the schools, little seemed more important than the expansion and improvement of the nation's educational facilities. By 1970, there would be a 25 percent increase in school children and a 75 percent increase in college students. Nor would building more schoolrooms help much by itself if teachers and curricula remained mechanical and boring.
> p. 662 One Thousand Days.

A projection is one tool for making better decisions under conditions of uncertainty. Gerhard Colm, the chief economist of the National Planning Association, has pointed out several types of projections which are useful. The mere continuation of past trends indicates likely direction and magnitudes if policies remain unchanged. A target projection indicates the magnitude of a task if the most desirable policies--from one or more standpoints--are undertaken. A comparison of a trend projection with a target projection indicates the steps which are necessary to achieve the desired end. It should be clearly understood that a projection is not an educated guess nor a prediction of the future. Rather, a projection is an estimate of the future magnitude under assumed conditions. A projection is a statement of the order: If A, then B; for example, if the percentage of high school graduates going to college increases at the rate of the past decade, then more than 50 percent will attend college in 1970. Therefore, projections will only be useful when the assumptions are realistic. Careful explication of assumptions is required, so that others can modify the projections for different assumptions or for changing conditions.

Projecting Population

Changing conditions create a degree of uncertainty. A relatively static world in which yesterday, today, and tomorrow are much the same would have little uncertainly. Policies once adopted would serve indefinitely. When a change occurred, it could be examined and a new policy adopted for continuous future use. A relatively static world would yield little data for making projections. Once any stable and relevant relationship was established, it would continue indefinitely into the future. The least squares method is one technique which is often employed in making a linear time trend projection and which makes the assumption of a static world. In periods of little or no change and in periods of stable relationships, such a technique yields good results. Change, however, makes such a projection invalid, and precisely at the critical juncture for policy such techniques often fail. Conditions of change call for more complex relationships than the simple proportionate mathematical model of least squares.

Because our world is not relatively static, the task of projections is made more difficult, more necessary, and more challenging. A look ahead requires more attention to assumptions and possible conditions affecting magnitudes. Exchange of experience makes growth in knowledge possible--knowledge about the behavior of variables, the construction of models, and the expression of stable and relevant relationships. Attention needs to be directed to procedures and techniques, as examination of methodology is at present the best test of projections. The reality of actual events is not available for the evaluation of projections in new areas such as student populations.

Varying Purposes of Projection

Projections of student populations have further constraints. Varying magnitudes might result from the purpose for which the projections are undertaken. I do not mean the obvious bias that one might imagine of making projections high to increase available funds, or low to restrict appropriations. Rather, I mean the legitimate differences resulting from whether one projects the demand for education or the supply of education. As you will see later, the interactions of supply and demand are difficult to separate, and most projections are a mixture of both. The difference is best seen in higher education. Institutional planners estimate the number of students which can be served by existing facilities and faculty, or additions thereto. They tend to concentrate on their ability to supply education. They may call for more facilities and faculty to increase the supply because demand is rising. Generally, their concern is with supply, its quality, and the balance of resources needed for a given supply.

Manpower planners, on the other hand, care little for the supply of education, but are concerned about the product and the demands which the economy places upon the supplying institutions. Projections of student populations from their standpoint are necessary only to achieve the necessary numbers of skilled manpower in appropriate occupations and professions. This viewpoint tends to restrict student projections to areas of emerging needs or of possible short supply. A large fraction of the student population can be kept from view as of no likely concern. The manpower specialist is concerned with the supply of education when it is likely to restrict the economy by being inadequate to meet demands.

The manpower specialist may be an economist but his view of educational projections differs from those of other economists interested in economic growth or countercylical policies. Each group of economists takes the appropriate partial view of education. Education is viewed as a user of resources in human capital investment and general public consumption. The manpower planner considers the needs of the educational institutions in presenting manpower requirements, but he concentrates more on its role as supplier of human capital. The growth economist takes a similar viewpoint but considers the supply of human capital appropriate for various growth rates. The optimal growth pattern would indicate limitations to certain types of educational programs and expansion of others. Alternative use of resources of the educational enterprise to promote growth would also enter the calculations. As investment is of prime importance for growth, education as a pure consumption good would most likely be neglected. For countercylical policy, schools might be encouraged to expand in periods of unemployment and to restrict enrollments in periods of labor shortages. If the expansion of education were directed to a greater supply of some skills, or a higher quality of skill, such educational programs could also serve the manpower and growth economist. In all these views, student projections would be limited to magnitudes which served the purpose. The economic returns of education, to the individual and to society;

the cost of resources; and the cost of change would be the measurements used. Such projections are useful and necessary. Nonetheless, the balancing of such projections with those indicating supply potential and with those indicating the demand potential is necessary.

The student or consumer of education does not make his own projections of educational populations although others do this in estimating the demand. For the traditional kindergarten to garde twelve program, projections are essentially an estimation of the relevant populations. Almost all children are enrolled, with the crucial assumptions centering on (1) the percentage of pupils who will drop out and the age at which this will occur, and (2) the percentage of those enrolled in public, private, and parochial schools. Estimates of enrollments for the new extensions of the school day, week, and year, and the schooling period are quite a different matter. Enrollments in these instances depend upon community pressures, and emerging state and/or national patterns. Public services for non-public pupils and dual enrollments indicate a similar situation.

The widening of choices at the secondary level among schools and curricula presents a greater challenge if estimates are done on a disaggregative basis. The possible further broadening of choices to include on-the-job training and apprenticeships, to mention only one possibility, creates a need for more attention to future developments.

Until the present, the paths to the end of grade twelve have been essentially conducted by the same traditional school system; this may not be true in the future--there may be separate school systems for target populations. They may become more like the post-high school patterns. The alternatives beyond high school will increase and include technical and vocational institutes as well as the junior and four-year college. It appears likely that the division between graduate education and professional schools will continue, with a possibility of new training institutes restricted to special subject areas but not affiliated with regular graduate schools. This development could arise from existing groups like the "think factories." At the present time, as a by-product, they produce highly trained manpower with specialized skills. Manpower with these skills is in short supply, and is not likely to be trained by educational institutions. As a result, for their own staffs and for others, these groups may directly undertake educational programs, which programs may achieve formal recognition. Such a development would be merely another branching in the system.

Varied Paths to the Same Goal

Various branchings and substitutions present problems in projections. There is the formal educational system from elementary through high school, college, and graduate school. Varied paths, however, exist to the same goal. Typing, for instance, can be taken as a vocational or academic course in high school, in an evening program conducted by the public high school or a group like the YMCA, in summer school, in a profit-making business school, and possibly other institutions. Enrollment for such a restricted area of study is of no concern here but the variety of offerings and institutions indicates one difficulty in projecting enrollments.

Assume the task for estimating the manpower training of morticians--to take an occupation or profession for which the need will presumably continue. Licensing standards prevail, but one can obtain the necessary skills on-the-job, in a profit-making business school, in a high school, in a post-high school program, in a vocational school, in a junior college, and, although I don't know of any such programs, probably in a college and a graduate program. Again, we need not consider such projections here, but the situation indicates another difficulty in making enrollment projections.

The education of the typist and the mortician indicate the branching and substitution problem which has an important bearing on enrollments of schools. The question of how many supplementary educational centers there should be, and with what type of student; the question of the role of public schools in adult education; the question of what extensions to the traditional school program; the question of the use of education as a tool in the war on poverty; the question of the relation of public schools to Job Corps centers, to education by business, and to education by profit-making schools--all of these questions have to do with substituting for or complementing public schooling and bear directly on size of enrollments and schooling period.

Projections of school populations, unless done from a purely demographic standpoint, must join together the many aspects of the social, economic, and political context in which education takes place. The central reason for projections, as indicated above, is to make decisions in a period of uncertainty and change. The biggest change today is the rate of change. The pace and quality of change radically affects the schools. The tempo of change is calling for schools to change. Much of the pressures for change in society have come about as institutions of higher education have made discoveries and done new work in almost every field. The emphasis on research in colleges and universities (and the resulting knowledge explosion) is now being turned on education itself.

Practical Purpose of Education

The purposes of education are being expanded and revised; greater impetus is being given to curriculum revision; new techniques are coming from research on learning and teaching; and the range of decisions, their context, and possible alternatives are changing. The changes affecting colleges and universities, and also elementary and secondary schools, are great. The emphasis is on the practical technical aspects of education--the saleable portion of education for the student, the faculty member, and the school. As Hechinger says in the New York Times,

> If higher education (and I would say all education) is the passport to technological and managerial as well as governmental power, then the liberal arts content of education may quickly come to be regarded as the non-functional and therefore superfluous remnant of the ornamental past.

He goes on to say that education could become

> so functional that the emerging new leadership will at best be acultural and at worst anti-cultural. The

> real danger is that of 'mapping out of the future by people who have no intellectual roots in the past' 1

This demand for practical education affects future patterns of enrollments, and possible present choices for education. Education has become such a good thing for purposes other than education itself, that soon all education may be for other ends. The degree of specialization required for proficiency in a field moves professional men, be they teachers, researchers, or employees of businesses, in this direction. The generalist is ignored in education and in the world of decisions. Educational enrollments come within this context. The purposes of education need be examined to properly place enrollment magnitudes. The framework of decisions naturally follow because the structure of educational decisions is changing. The world of work of tomorrow is ultimately related to both aspects of change. The pressures on educational institutions are coming from the students looking to future employment, and from business, industry, and government as they look for certain types of trained manpower. The educational system is the focal point for these changes.

If it were not for the fact that a wide variety of interacting political and economic factors result in restricting possible enrollment projections within a rather narrow range, and if it were not for the additional fact that the lack of available data and knowledge severely limits adjustments which might be made for recognizable tendencies, one would hardly undertake to make any projections in the present state of flux. The projections given at the end of this paper illustrate one possible order of magnitude (which I still believe to be accurate and reasonable although the basic work was done between 1962 and 1965.) Some revisions might be done today. Much additional knowledge, data, and research is needed to give more refined results, or greater disaggregation on certain bases for policy decisions. As a first approximation of magnitude and direction, the projections still apply. The assumptions underlying them are presented in the research memorandum. 2

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[1] New York Times, Sunday, (August 21, 1966).

[2] Mushkin, Selma J. and McLoone, Eugene P. Public Spending for Higher Education in 1970. The Council of State Governments. (Chicago, Illinois: 1965), 68 p. (continued)

Some revisions of these assumptions are presented in the discussion which follows. The revisions arise mainly from an increase in the rate of change. Possible developments have a higher probability of acceptance today than a year ago.

Why Education?

The purposes of education as desired by society were left to the educator for definition until recently. Now almost every group in society has some end that education should serve, and most groups care little for what the professional educator might say. When people say that general education is also vocational, they are not recognizing a role for general education but are broadening the content of vocational education. Subjects like mathematics and English are valued as providing work skills, not general culture. Furthermore, some persons find the actual content unimportant and stress the habits learned. The habits, of course, are those valued by employers and are not the virtues of the whole man. Education has become the means of investment, and mostly investment for the world of work. The emphasis of this aspect, however, often overshadows any other value of education. One could hypothesize, and possibly test, that the lagging growth of enrollments in some colleges is due to their lack of vocationally-oriented curricula. Similarly, one could say that the employment problem of the drop-out results merely from the fact that employers use graduation as a screening device. Given more than one path to employment, the drop-out might cease to be a problem. Merely recognizing that students who wish to leave school may be ready for the world of work, and convincing not only educators but employers of this fact, might turn the trick.

Essentially, these new views of education come from outside the profession. Earlier, the partial view of education held by some economists was discussed. Social reformers similarly have a partial view of the school. For them, education is an important task, but education must not serve to make people race conscious, etc. Secondary ends are most important and tend to be emphasized by

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[2] ________, and ________ Local School Expenditures 1970 Projection. The Council of State Governments. (Chicago, Illinois: 1965), 86 p.

social reformers to a degree which ignores primary purposes. The political mechanism responds to all these pressures--education now has a component best typified by a Commissioner of Education's telling staff members of the U.S. Office of Education that every job description contains an interest in civil rights and education in the rest of the world. All of these viewpoints share a common interest in the practical results of education. And perhaps, the culmination of this emphasis upon the practical is the emerging educational industry.

There have always been educational suppliers who specialized in school products. Today, these groups are joined by companies operating educational institutions for a profit, such as Job Corps Centers, and other companies planning educational systems for sale to state and local school systems. The difference between the traditional suppliers and the new entrants is mainly the comprehensive aspect of the new products and the high cost of the new capital equipment. The educational industry seems directed toward a desirable end of making education more capital intensive. The materials and equipment these groups are seeking to provide will remove many educational decisions from educators to the suppliers, and will make certain choices of more lasting influence because of the high cost and long life of capital equipment. This growth of the education industry, at the same time when other groups are seeking education for particular purposes, creates the danger that education will be limited to these practical ends. The possibility exists that a state legislature might purchase materials and equipment directly from a supplier instead of continuing payments of state aid.

Who Makes Educational Decisions?

The framework for educational decisions is changing as a result of the educational industry, the new uses of education, and the structure in which these elements are placed. Simon indicates that an administrator has three choices in a decision:

(1) He can decide who decides,
(2) He can decide not to make a decision, or
(3) He can decide the question himself.

Many of the developments in education fall in the second category by default. The existing educational policy-maker is neither aware of nor consulted on new developments. The context of decisions is liable to be the past or present, without consideration of future or emerging developments. Projections are one means of reducing this recognition lag. If projections are to be useful, they need to examine emerging changes and indicate likely developments. The knowledge of such change means that present decisions can more readily be viable in the light of future developments. Such recognition is vitally important as research yields new theories and ideas; as research is turned on the decision-making process; and as citizens view the federal government, the states, and localities as alternative sources of funds, and as alternative means for achieving desired programs. All of these developments mean a flux in educational institutions and in educational programs. The new developments I have discussed above mean that our traditional educational system can be bypassed if it does not adapt. Many groups other than educators are deciding who can decide. The future of the public school system as we know it is at stake in the outcome of this process. This context is best seen with an eye to the programming-planning-budgeting system (PPBS), which may well define the rules of the game for future governmental decisions, and may well decide who decides.

Programming-Planning-Budgeting Systems

The decade of the 1960's may be viewed in retrospect as the time when the spotlight of research was placed upon the affairs of government. The programming-planning-budgeting system of the federal government indicates such an occurrence nationally. The Department of Defense, under Secretary McNamara, has led the way in the use of this management process. The process has spread not only throughout the federal government, both by the Executive Order 66-3 and by switches of department of Defence personnel to non-defense agencies, but also into state and local governments through similar processes. The widespread adoption of this management tool, or possibly even the chance of its widespread adoption, creates a new climate for all of government and, in some special respects, a new climate for education. Regardless of whether we view the PPBS process as a tool for decision-makers, as a set of rules for discussion, or merely as a means of taking a more rational view of present action, it will greatly affect the allocation, within the public sector, of resources to programs. It also may well affect total allocations to the public sector. The use of available resources made by schools, colleges, universities, and other educational institutions will be affected. To a degree, PPBS establishes prices for public goods so that central decision-makers can choose among competing programs with given budget constraints and objectives. Also to a degree, PPBS establishes standards of performance which require lower-echelon administrators to evaluate output produced for resources used, or to face the possibility of an unfavorable comparison with other similar units elsewhere. If federally-assisted programs are introduced, then such comparisons may become part of the grant operations.

A program administrator will also need to know

(1) which other programs benefit from the spending of funds on his program
(2) for which other programs portions of his own program could substitute,
(3) which other programs his own program complements, and
(4) which other programs are more expensive because of his own program's activity.

Answers to the first three questions help an administrator make the best case for maximum funds, and the answer to the fourth helps him avoid being caught unaware by counter-arguments against his own program. All of this can result in "more bang for the buck," and can also result in providing the citizenry with better information for rational decision.

Role of Alternatives

An important aspect of PPBS is the evaluating of alternative uses of funds and the quantifying of results. Education may become valued for these parts that can be quantified and it may become an alternative use for other similarly quantifiable programs. To place this quantification in perspective, let's look at those purposes of education most amenable to analysis.

Education has been discovered to be a useful good, a means to serve an end. An educated man earns more for himself, and contributes more to society. Education is a large component of the residual factor in economic growth and production not explained by labor and capital. Education is investment in human capital. This economic usefulness of education has been discovered and is used to justify allocation of resources for education. Additional resources are also justified for other goals which education can serve. Poverty, racial discrimination, unemployment, and other societal problems can be solved, in part, by education. Educational institutions provide a basis for new knowledge, and contract with business and government to do research. The same institutions train the manpower for research by government and industry. Education also is good politics, as governors are discovering. A danger lies in the fact that education has become good business, good economics, a good social tool, good investment, and good politics. Education has become very useful as a means to other goals. It's too important to leave it to the educators, as one U.S. Commissioner of Education said. Many may value education for particular goals, and it may come to be valued only for those goals.

Projections of Student Populations

With Dr. Selma Mushkin, I have set forth magnitudes by state for (1) (a) the traditional programs of public elementary and secondary schools; (b) what we call extension programs of extended school day, week, and year, and increased age of attendance; and (2) degree-credit enrollments of private and public colleges and universities. These magnitudes of enrollments were a necessary step in the production of expenditure projections for these two functional areas. To date, I feel the magnitudes are justified as accurate illustrations of likely developments. The less-than-expected increase in college enrollments in Fall, 1966, should have caused no surprise, as the increase closely paralleled the change in population of high school graduation age. Thus the projections are roughly of the right magnitude as indicators of potential demand. The projections were made generally from fiscal year 1962, as a base, to calendar year 1970. The projections are part of Project '70, a cooperative education and research project of state governments and the central project staff.

The projections were financed by the Interagency Growth Study of the federal government to obtain national totals of state and local spending. Disaggregative revenue and expenditure amounts for some 100 categories were projected on a state-by-state basis to yield national aggregates better than those possible with national data alone. The feed-in of information by state officials assures better projections than are otherwise possible by bringing intimate knowledge of the individual state to bear on the items projected. Nonetheless, a uniform response was necessarily assumed for newly-enacted or potentially-developing federal programs. Separate state response to these federal developments was not taken into account, nor was individual state response in developing new state programs.

On the likely development of federal programs, we could easily take pride in the success of our "clairvoyance" in predicting magnitudes and direction. There is particular pleasure in having projected expenditures for urban extensions under the Higher Education Act and having published them in February, 1965 (particularly since President Johnson called the bill "a real sleeper of my administration" when he signed it in August, 1965.) Contrariwise, we failed to include estimates of the effect of the G.I. Bill for college education in the projection of enrollments and expenditures. Of greater importance than this omission was the failure to judge the change of the Viet Nam situation with its two-fold effect on federal government spending and price changes. The increase in military spending has delayed or reduced the increase in domestic spending--particularly grants-in-aid to state and local governments. At the same time, prices have had a higher rate of increase than has been experienced in the immediate past, and have had a higher rate of increase than was projected. This oversight may have great consequences, and drastically changes one of our conclusions; no longer will state and local governments in the aggregate be able to finance their projected outlays--there will be a crisis of state-local finances. There will be a fiscal gap for the states considered as a group.

Using a different model of the Interagency Growth Study with price increases up to August, 1966, we find a gap in the aggregate for states and localities as a whole. Detailed analyses were not done, but disaggregate national data were used. The deficit arises because federal grants do not tend to be affected by price changes except for Title I of Public Law 89-10 which is based on one-half statewide average current expenditure per pupil, and because expenditures are more price sensitive than revenues. The problem may be compounded by a slower increase in federal grants than was projected. Federal grants for all state and local purposes for fiscal '65 were estimated at $16.0 billion and seem destined to reach only $14.8 billion, due to Viet Nam spending. Only the funding of the programs is reduced, and not the impetus, so states and localities may find themselves faced by the program pressures without the outside assistance. The deficits may thereby become even greater; the areas of crisis will be specifically those which adopted more of the Federally-financed programs because of local needs which previously had not been met due to budget constraints.

What is an Occupation or Profession?

The projection of student populations with a view to the world of work requires knowledge of existing and future jobs. One also needs to know the proper manner of training for particular jobs. Quite a lot of research funds could be spent to discover the job requirements and proper training for the mortician or the typist. We know little about substitution between professions, and we know little about the supplemental role of certain courses such as typing for people in unrelated professions and occupations. Likewise we know little about why business trains its employees. Are the schools inadequate? Is the task unique to an industry? Does business prefer to mold its own employees? We do know that there is a great willingness to train employees when labor is scarce. We also know that post-high school education tends to be pursued more when jobs are scarce. We also know that when the supply of workers exceeds demands there is a tendency to push for upgrading of entrance requirements. (It seems likely that an M.A. may become the entrance requirement for teachers in the late 1960's if the supply promised is forthcoming. The growing number of applicants will permit an increase in standards without causing a shortage.) Other aspects are of equal importance. The limiting of the career ladder in teaching to high school positions generally may collapse with the growing demands of higher educational institutions. The demand of the educational industry for master technicians of teaching may also exert an influence on schools. Teaching machines may change the job content of the teacher. The influences of society on education and of education on society may greatly change the concept of occupations and professions. All of these influences affect future student populations. The effects can best be seen in the influence of opportunity costs on free education.

I alluded to the fact that more students take post-high school work when jobs are scarce. This is an operation of the influence of opportunity cost. In such instances, the foregone earnings of the student are low or nil and the future gain great. The provision of free college education is made possible by the restrictive cost of foregone earnings. The fact that the student makes a sacrifice prevents all from taking advantage of the opportunity. The constraint becomes one outside of the educational system. Various forms of scholarships and part-time student employment are devoted to lessening the burden of the opportunity cost. No one seems willing as yet to eliminate the opportunity cost by making grants to cover both tuition and other expenses, leaving it up to the student to make the shoices on how much to spend and how to divide the expenses. The so-called "cost of education" grant for college education is such a proposal. Students would be allowed to withdraw funds in $50 amounts with a commitment to repay the full amount borrowed plus 6% interest, or to pay .01 of 1 percent of income tax payments for each $50 unit used after graduation with no requirement that all funds must be repaid. The latter is very important if persons with low income after graduation are not to be discriminated against. The adoption of such a proposal might increase the number of students pursuing an education.

Another possible development is the adoption of a policy of investing in people throughout their lives rather than before the age of 22 years or before entrance to the working force.

Establishment of a continuing education policy, through a sabbatical for all as part of the social security system, would change pre-work education requirements,and would alter the requirements of curriculum change necessitated by the knowledge explosion. The adoption of this type of policy would lessen student population in many traditional educational programs but would create a new structure with its own enrollments.

Student Population Projections Compared

The national projections of student enrollments depend on the underlying population. The projections of the U.S. Office of Education for elementary and secondary enrollments, although higher than those of the U.S. Bureau of Census, seem reasonable and are used by the author for elementary and secondary enrollments.

For college enrollments, the magnitudes of possible demand projected by the U.S. Office of Education seem low and thus are raised. The increased magnitudes for college enrollments do not reflect any change in national projections as such but are a reflection of state-by-state distribution of the total college-age population. In other words, the increased enrollments are a reflection of the location of the college-aged population. The upward adjustment of college enrollments, thus reflects only the location of youths by states, and not a change in the proportions attending college.

In a similar manner, the continuation of the same proportion of children attending elementary and secondary schools reflects an upward adjustment of those remaining in school in the South. The slowing down of Soutnern emigration means that more students will need to complete more grades in the South than previously. Again crucial factors for the projections become those of the location of pupils and not the percentage of youths enrolled in school. In fact, one of the lessons learned in making the state-by-state projections of enrollments is that there is a difference between a national total obtained by summing state data and a national total obtained from national data alone. National totals are improved by attention to state aggregates;

sometimes a larger total results, and sometimes a smaller one. Rarely are the totals the same Similar differences, most likely, would result from summation of local data for a state.

The data presented seems to indicate the likely levels of student enrollments, but these levels may change if certain national programs become more important. The levels may increase but the degree of increase is limited. Extension of the traditional program seems the more likely direction of change. The author's projection of elementary and secondary enrollments allows for this development.[3] The projection assumes certain uniform responses by all states, which may not be true but which is the best assumption which can be made on a national level. State knowledge is necessary for a closer approximation.

Varied responses, attention to differing conditions, and knowledge of state policy is necessary to produce better projections. Those given assume the most that presently seems probable. We need to make assumptions about the future role of education, the progress of the education industry, the adoption of PPBS, and other unfolding developments, in order to make better approximations upon which to base decisions. The extent to which these developments will affect policy within the next five years, is a moot question. Short-term policy will most likely be made without the benefit of these recommended projection techniques; present projections will serve well for most purposes.

The myriad unknowns of the future lead me to conclude that a projection of student population is best viewed as part of a process of looking ahead rather than as a product forecasting the future. As part of the process of a forward look a projection is useful to decision-makers. As a product portraying knowledge of the future, a projection may replace the uneasy feeling of ignorance which results in cautious and tentative action, and thus be harmful. The best test of projections is their use and their best use is as part of the process of decision-making under uncertainty.

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[3] Mushkin and McLoone op. cit.

CHAPTER IV

THE CHANGING OCCUPATIONAL STRUCTURE WITH IMPLICATIONS FOR EDUCATION

Leonard A. Lecht*

In his analysis of the changing occupational structure, Lecht discusses the manpower requirements for achieving national goals in the private and public sectors of the economy in the 1970's. Although technological change is frequently singled out as the strategic variable in the changing occupational structure, the author also considers the influence of more wide spread educational opportunity and attainment, the impact of rising family incomes, greater leisure, and the manpower needs generated by pursuit of our nation's priorities. With this information high and low growth rates for various occupations are ascertained, and training needs are projected.

Introduction

Many organizations and many agencies are concerned with the nation's future manpower needs. The United States Department of Labor publishes projections indicating the probable employment in many occupations in the next decade. The Office of Education prepares estimates of requirements for teachers in the next ten years, and the National Science Foundation has prepared similar estimates of requirements and supply for scientists and engineers. The distinctive element in the manpower requirements for achieving national goals in the private and public sectors of the economy in the 1970's. These estimates are based on the findings of a study conducted by the National Planning Association's Center for Priority Analysis for the U.S. Department of Labor.

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The subject of this paper, "The Changing Occupational Structure With Implications for Education," deals with the future. We train and educate young people now or in the next few years for the jobs which are likely to be available 5, 10, or 20 years from now. When we think of estimating the types of jobs and the number of job openings which will characterize our economy in a decade or two, we usually think of "probable trend forecasts." These are estimates of the probable employment openings in different occupations derived from projections of past trends in employment, combined with judgements concerning how these trends are likely to change in the future.

Analysis of past trends is useful and necessary for understanding the implications of the changing occupational structure for education. However, our society's goals for the future, the directions in which we would like our nation to move, and the purpose for which we believe we should commit our resources also have significant consequences for future manpower and educational needs. Changes in our nation's objectives, in the recent past, have frequently been the dynamic force, making for changes in the economy's manpower requirements.

The role of the space program in the past decade offers one illustration of the influence of decisions, to implement new national priorities for requirements for scientists and engineers. The rapid growth in manpower needs in education, and the current concern with teacher shortages, constitutes another. Similarly, new programs to increase the availability of medical care to Americans, programs symbolized by Medicare, have led to widespread concern that shortages of trained and educated manpower, in this case in the health occupations, could serve to frustrate the achievement of our health objectives. These changes in manpower needs have important implications for wage rates, salary levels, and the labor market. They also raise the question of "Education for what?" for persons concerned with the relationships between the nation's educational system and its job development needs.

Teaching and learning are obviously important for many reasons other than preparing people for jobs. The skills and knowledge gained through education are the prerequisites for successful vocational training, for personal fulfillment, and for intelligent social and political participation in a complex technological society. Widespread diffusion of educational opportunity has been our main channel for diffusing social and economic opportunity. It is for these reasons that President Eisenhower's Commission on National Goals recommended in the early 1960's that "education at every level and in every discipline be strengthened and its effectiveness increased. ...This is at once an investment in the individual, in the democratic process, in the growth of the economy, and in the stature of the United States."[1] With similar considerations in mind, President Johnson proposed in 1965 that "we declare a national goal of full educational opportunity.[2]

Manpower Projections and Economic Framework

Since the pursuit of our goals, and their implications for the nation's occupational structure refer to the future, the point of departure for our manpower projections is a consideration of the economic framework which can be expected to characterize our society in the 1970's.

The limiting factor in realizing our objectives in the next decade is likely to be a volume of output anticipated to increase to a trillion dollars by 1975 (in dollars of 1964 purchasing power). This increase assumes a GNP growing at a rate of 4.5 percent a year between 1964 and 1975. A 4.5 percent annual increase in GNP is considerably larger than the average increase in GNP of 3.8 percent a year for the entire period since 1947, although it is somewhat smaller than the close to 5 1/2 percent growth in output of the past two years. Sustaining this pace of growth for over a decade would involve active fiscal, monetary, and manpower policies by the Federal government to maintain effective demand and to minimize potentially inflationary pressures.

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[1] "Goals for Americans," The Report of the President't Commission on National Goals, The American Assembly, (1960), p. 6.

[2] "President Johnson's Message to Congress on Education," (1965).

The Gross National Product and the other basic ingredients in this economic framework are summarized in Table 1. All dollar estimates are in 1964 dollars.

TABLE 1

ESTIMATED GNP, POPULATION, AND
FAMILY PERSONAL INCOME,
1964 and 1975

Item	Actual 1964	Projected 1975
GNP (in billions)	$622	$1,010
Population (in millions)	192	226
Civilian Labor Force (in millions)	74	91
GNP per Person	$3,240	$4,470
Average Family Personal Income *	$7,800	$10,350

* This estimate of average family personal income refers to "consumer units" -- to families and unattached individuals. The figures cited represent the arithmetic means.

By 1975 the population is expected to increase to 226 million, or 34 million more than in 1964. By the mid-1970's, it is anticipated that three-fourths of the population, or some 170 million Americans, will probably be living in urban areas. The movement of the Negro population away from the rural South to urban centers is likely to continue. By 1975 it is estimated that 85 percent of the Negroes in the United States will be living in cities.

With the indicated growth in GNP and population, the civilian labor force is expected to increase by 17 million persons between 1964 and 1975. This represents an average increase of 1.5 million a year, or a 50 percent larger increase than the average annual labor force growth in the decade before 1964. A larger proportion of the labor force in 1975 will be made up of younger workers. Workers in the under 35 age group are likely to constitute 47 percent of the total in the mid-1970's compared with 40 percent in 1964. The proportion of women in this changing labor force is anticipated to increase only slightly, from about 35 to 37 percent.

Will our economy grow rapidly enough to absorb these 1.5 million new members of the labor force into useful employment? On the other side of the ledger, will there be enough trained and educated persons in the areas where employment can be expected to expand rapidly to meet growing needs -- in teaching or in the health occupations for example? Since our basic institutions and technology are unlikely to change radically in the short period of 10 years, some insights into these problems for the 1970's can be obtained by briefly examining the changes in the occupational structure since World War II.

The occupations for which high school graduation and, even more so, college graduation are the typical requirements have been expanding rapidly since World War II. Employment for professional and technical workers, for example, grew by over six times the overall percentage increase in civilian employment. The occupations which provide the bulk of the job opportunities for persons with less than a high school education, especially jobs as operatives or laborers, have been growing slowly. Employment in farm occupations, historically the source of employment for many persons with limited formal schooling, declined by over two-fifths between 1947 and 1964. Offsetting these tendencies to a partial extent, was the fact that employment in service occupations, also a job source for many persons with less than a full high school education, grew by over half in the post-World War II period.

While job opportunities for operatives and laborers have been growing more rapidly since 1961 because of the capital goods boom which has characterized our economy and, more recently, because of the war in Viet Nam, these broad shifts in the occupational structure are likely to continue in the next decade. Technological change is frequently singled out as the strategic variable in accounting for the overall changes in the occupational pattern. Although it is certainly important, technological change is only one of several factors which can be expected to influence employment opportunities in the next decade. Others which must also be considered include the influence of more widespread educational opportunity and attainment, the impact of rising family incomes and greater leisure, and the manpower needs generated by pursuit of our nation's priorities.

All of these factors interact with one another to produce the economy's occupational pattern.

The effects of technological change for employment are generally measured by the rate at which productivity increases. Concern with the impact of technological change has been responsible for much of the discussion of "the manpower revolution," or of "automation" in recent years. Many persons, including a number of economists, who have observed the rapid advances in computer technology and in cybernetics, have become apprehensive that productivity will grow so rapidly in the next decade that a far smaller volume of employment would be needed to produce the trillion dollar GNP projected for the mid-1970's. Most of the persons displaced would be unskilled operatives and laborers although technical advances in such fields as inventory control could also reduce employment for white collar workers as well.

GNP produced per man-hour is probably our best single index of productivity growth for the entire economy. There is a significant amount of evidence indicating that GNP per man-hour has been rising in the past generation. The National Commission on Technology, Automation, and Economic Progress has estimated in its report to President Johnson in 1966, that output per man-hour in the private economy since 1947 has been growing by 3 percent a year compared with a 2 percent annual increase in the preceding 35 years.

The persons who are apprehensive that technological change will create mass unemployment for blue collar workers anticipate, explicitly or implicitly, that productivity will grow by something of the magnitude of 4 or 5 percent a year in the next ten or fifteen years. If this version of the future were to materialize, the objective of educational planning in the United States would be to keep as many young people in college and out of the labor force as possible, so as to reduce unemployment and educate people for the types of jobs which technological advance did not render redundant. At the other end of the spectrum, it would be wise social policy to increase incentives for early retirement, say at age 60, so as to create new job openings for young people and opportunities for occupational upgrading for others.

I do not share this representation of the future because I do not subscribe to the anticipations of discontinuous productivity increases in the near future. It is reasonable to expect that productivity will continue to increase, and to cause problems of loss of jobs and declining employment opportunities in a number of individual occupations. However, on an economy-wide basis, using GNP per man-hour as an indicator, the productivity increases in our projections average 3.3 percent a year, or slightly greater than the annual productivity growth in the 1947 to 1964 period. This estimate is in accord with the conclusion of the Commission on Technology, Automation, and Economic Progress that "a sharp break in the continuity of technical progress has not occurred, nor is it likely to occur in the next decade."[3]

Since the rate of productivity increase is so critical a factor in estimating the manpower needs for which our education system prepares young people, the reasons for this expectation of modest increases in productivity warrant further consideration. If science and technology are likely to enable us to land men on the moon by 1970, why aren't they also likely to change our ability to produce by 1970 or 1975 in an equally dramatic way?

One of the considerations entering into our productivity estimate is that several of the most rapidly growing sectors of the economy, such as the services sector, are characterized by slow growth in productivity. Another consideration is that agriculture is becoming a rapidly diminishing share of total economic activity in the United States. The agricultural sector has been dominated by high rates of productivity increase which have served to pull up the national average. In addition, the persons who look forward to the productivity increases of 4 or 5 percent a year tend to overlook the time lag between the initial establishment of the technical feasibility of an invention and its diffusion into everyday industrial use. It took some thirty years, to cite an instance, for the diesel locomotive to generally supplant the steam locomotive. If we were attempting to estimate manpower needs thirty or forty years from now, the role of productivity increases would loom considerably larger in our calculations. For the next decade, the computer oriented technologies, will change the broad trends in the distribution of employment in our society.

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[3] Technology and the American Economy, Report of the National Commission on Technology, Automation, and Economic Progress, (1966), p. 1.

Some of the changes in manpower requirements attributed to technological advance are probably due to the greater importance attached to education. The educational level in the United States has been increasing rapidly in the past two decades and this increase is likely to continue. As recently as 1952, three-eights, or 38 percent, of the persons in the labor force who were at least 18 years old had completed less than 8 years of schooling. By 1965, this proportion had dropped to less than a fourth -- to 23 percent. The percentage with at least four years of high school education had grown from 43 percent in 1952 to 58 percent in 1965. While this upgrading of educational levels had been generally characteristic of the labor force, it has been especially marked in the less skilled occupational groups such as operatives and laborers.

The significance of rising levels of educational attainment can be summarized in the expression that "supply creates its own demand." As the supply of well-educated, or better educated persons increases in virtually all occupational fields, the greater availability of these persons to employers becomes an important factor in raising entrance requirements for many types of jobs. The college diploma supplants the high school degree which was regarded as the entrance requirement for the more responsible white collar positions a generation earlier. Graduation from high school becomes a prerequisite for advancement to foremen's jobs or for most types of work involving dealing with the public. It is difficult to determine the extent to which these higher educational qualifications represent functional requirements for performing a job, but insofar as they become prerequisites for employment, they serve to increase the penelties for lack of formal schooling.

Many of the changes in the occupational structure are also due to shifts in consumer spending brought about by rising average family incomes. In 1964 the average family income in the United States was about $7,800. By 1975 it is expected to be close to $10,400. As our society becomes more affluent, the majority who share this affluence spend a smaller share of their income for food or housing, and a larger share for services and for durable consumer goods. Spending rises more than proportionately for automobile purchase and operations, for vacations and travel, for books and education, for hobbies and recreation, for medical and dental care, and for the services of beauticians, household appliance repairmen, and gardeners. These shifts in consumer spending make for more rapid growth in a number of fields and especially in professional and service occupations.

The level of defense expenditures will also influence the occupational structure in the 1970's. Expenditures for national defense create their own pattern of job requirements in the private economy affecting employment opportunities for scientists and engineers, and also for factory operatives to produce the complex hardware required for national defense. Assuming that existing levels of international tensions continue for another decade, expenditures to maintain conventional armed forces and to incorporate technological advances in weapons systems are projected to reach $70 billion in 1975. If international tensions were to decline sufficiently to permit partial disarmament following the outlines of the United States' disarmament proposals at Geneva in 1962, defense spending in the mid-1970's is estimated at approximately $40 billion. Both of these projections of defense spending represent a decline from the 8 to 9 percent of GNP allocated for defense in the early and mid-1960's to 7 percent or to 4 percent, respectively, of the trillion dollar GNP anticipated in the 1970's. Barring a considerable increase in international tensions, it is unlikely that the manpower needs for defense in the next decade will represent a larger proportionate claim on our human resources than at present.

National Goals and Manpower Requirements

The degree to which the nation pursues its goals, and the priorities our society assigns to each, will also be important factors in determining the pattern of job requirements in the next decade. Emphasis on pursuit of our objectives in health and education would primarily increase the demand for white collar, and especially professional employees. Concentration on rebuilding our cities, conserving and developing our natural resources, or modernizing our industrial plant would largely increase employment opportunities for blue collar workers. Substantial progress toward achieving our goals in these and in other areas could be a major element in creating full employment for a labor force utilizing the technological advances anticipated in the next decade.

Terms such as "goals" are concepts which are sometimes taken to refer to abstract purposes divorced from everyday experience. The relevance of the pursuit of national priorities for manpower needs and employment opportunities can be illustrated by recent experience in research and development. National objectives in defense, space, atomic energy, and health have been largely responsible for a tripling of research and development expenditures in the ten years after 1953, an increase from $5 billion in 1953 to $17 billion ten years later. As a result of these expenditures, we have created a new type of enterprise, the R & D enterprise. In many ways this enterprise is a separate industry or, more accurately, a collection of industries concerned with advancing the frontiers of knowledge and with the application of new knowledge. The R & D industry creates employment for many persons other than scientists and engineers although the greater volume of R & D is primarily responsible for the rapid growth in employment for scientists and engineers. In 1962 research and development activities created employment for an estimated 2.2 million persons in R & D enterprises or in other industries supplying inputs for the R & D enterprises. About 450,000 of these persons were scientists or engineers. The research and development industry also created employment for some 160,000 technicians, for close to 300,000 clerical workers, and for 90-odd thousand service workers including over 20,000 charwomen, janitors, and porters, and 10,000 guards and watchmen.

To achieve the nation's objectives in defense, atomic energy and space, and also to expand our R & D effort in such areas as water desalination, mass transit, health, or oceanography is estimated to involve a growth in research and development expenditures to $40 billion a year by 1975 (in 1964 dollars). A Achieving our goals in R & D would increase employment in the enterprises directly or indirectly related to these activities to an estimated 4.3 million, or some 2 million more than in 1962. Over three-fourths of this total are expected to be in occupations other than scientists and engineers.

The estimates for research and development illustrate the types of manpower projections we have been concerned with in our study for the Department of Labor. Research and development is one of the sixteen goals under consideration in this study.

Where do these goals come from, and who determined that they were to be designated as goals? To begin at the beginning, in 1960, President Eisenhower's Commission on National Goals listed a series of goals in fifteen areas representing what the Commission regarded as areas of needed change in our society. Space exploration was added as an additional goal after the late President Kennedy proposed in 1961 that it become a national objective "to put men on the moon and bring them back." This we interpret to mean the goal of embarking on a sustained space program. Later, needs in each of these areas, and standards for their achievement reflecting current opinion and current developments were formulated by the National Planning Association from special studies, legislative hearings, legislation, and national policy. As the initial step in developing goals analysis, the National Planning Association's Center for Priority Analysis undertook from special studies, legislative hearing, legislation, and national policy, a two-year study of the dollar cost of achieving the sixteen goals in the 1970's. The report of this study has been published by the Free Press in 1966 under the title of Goals, Priorities, and Dollars--The Next Decade.

Some of the goals, i.e., consumer expenditures on housing, are concerned with individual well being. Others, education is an instance, affect both the well being of individuals and the pace of economic growth. Serveral of the goals are directed at removing the adverse impacts of economic change on groups of individuals. Area redevelopment or manpower retraining are examples. Others, such as the national defense or the international aid goals, are concerned with protecting the nation's security and enhancing the prospects for world peace. For many of the goals the role of public authority is minimal. Consumers, for example, determine the manner in which they spend their income. In others, as in national defense, public authority alone determines the standard and makes the decisions controlling expenditures. In still others, urban development is a leading instance, the Federal Government utilizes its expenditures to encourage private firms and municipalities to rebuild their central cities.

The estimates of dollar costs for the goals have been derived from the quantitative relationships their achievement would require. The "improvements" considered in the education goal have been translated into ratios of teachers and related professionals per 1,000 students, changes in the compensation of faculty, and in the additional classroom, laboratory, and dormitory space needed for the greater percentage of the eligible age groups assumed to be attending school in the education goal. The standards for each of the goals represent levels of achievement regarded as reasonable and individually within reach in a free enterprise system in the light of current experience and knowledge. The research in the initial study also indicates that achievement of all sixteen goals in the next decade would require a 15 percent larger volume of output than is expected to become available within that period of time.

The areas for which goals have been listed include virtually all sectors of the private and public economy. They offer a framework therefore, for relating the utilization of the nation's resources to its objectives. One step in developing this framework has been to translate the estimates of the dollar cost for these goals into the manpower requirements they imply for some 80-odd occupations.

TABLE 2

EXPENDITURES FOR INDIVIDUAL GOALS, 1962, and 1975* (IN MILLIONS OF 1964 DOLLARS)

Goal Area	Expenditures in 1962	Projected Expenditures for Aspiration Goals in 1975
Agriculture	$ 7,350	$ 9,300
Area Redevelopment	350	1,000
Consumer Expenditures	364,750	674,400
Education	31,150	85,950
Health	34,000	89,800
Housing	30,850	65,000
International Aid	5,550	12,550
Manpower Retraining	100	3,050
National Defense	53,750	70,700
Natural Resources	6,050	17,100
Private Plant	50,050	155,050
Research and Development	17,350	40,000
Social Welfare	39,050	94,400
Space	3,400	9,550
Transportation	35,950	76,650
Urban Development	67,700	136,700
Gross Total	$747,400	$1,541,200
Minus Double Counting and Transfer Adjustments	$174,100	$ 379,600
Net Cost of Goals	573,300	1,161,600
GNP	$573,300	$1,010,000

* Derived from Lecht, L., Goals, Priorities, and Dollars - The Next Decade. The Free Press, 1966, Table 1-2, p. 36.

Where and how we assign our priorities in a democracy is determined by the decisions of firms, trade unions, and consumers, and by legislation enacted at all levels of government. Yet research and analysis are essential if we are to have the information needed for intelligent choices. Economic annalysis can indicate where rapid expansion in the pursuit of particular goals in the same period of time is likely to create serious competition for the same manpower resources. Higher education and R & D are illustrations. It can also indicate the probable pattern of manpower requirements and job development needs which would emerge from the pursuit of our goals. Research in manpower requirements for pursuing our goals is especially significant because the limiting factor in achieving some goals, as in research and development, is more likely to be a barrier of insufficient scientists, engineers, and technicians than the barrier of insufficient dollars.

Occupational Growth

As a democratic and relatively wealthy nation, we shall very probably be pursuing all the goals on our list in the 1970's. It is also likely that some new goals will emerge and that present standards will be raised. The nation's current concern with poverty or with urban problems is symptomatic of some of the directions where significant changes can be anticipated. The public and private expenditures in pursuit of our national objectives can be expected to be a major factor in generating employment for millions of individuals in many different occupations and industries.

What would this spending mean for the growth prospects in individual occupations, and for the educational planning to take these prospective changes into account? To provide some tentative answers to this question, we have prepared an occupational growth profile which summarizes our findings for most occupations. In this profile the individual occupations are classified as "high," and "low," or "moderate" growth occupations. These classifications relate to two estimates of employment by occupation in the mid-1970's. One projection refers to the anticipated manpower requirements for achieving the sixteen goals in the 1970's. This estimate presupposes an average annual increase in GNP sufficient to achieve all of the goals--an increase we estimate would amount to 5.8 percent a year. This is a very high figure.

To impart greater caution to the projections in the growth profile, they are also related to a benchmark estimate indicating the probable growth in the demand for labor if the gross national product were to grow by about 4.5 percent a year over the next decade--a reasonable if optimistic estimate.

The "high," "low," and "moderate" classifications have been arrived at by comparing the anticipated increase in employment in each occupation with the projected overall increase in civilian employment in the two projections. If the 4.5 percent GNP growth rate in our economic framework were to be achieved , total civilian employment would grow by an estimated 25 percent between 1964 and 1975. Realization of all sixteen goals is projected to involve an increase in employment of over two-fifths, or 44 percent more than in 1964. Achieving all sixteen goals in the mid-1970's would require the employment of more persons than are likely to be in the labor force.

The high-growth occupations are projected to grow at a considerably more rapid rate than the 25 or 44 percent increase listed for total employment in the two estimates--by at least a third more in terms of percentage changes. The low-growth occupations are the ones which are expected to grow at a considerably less rapid rate; for the moderate--growth occupations do not depart substantially enough from the changes in overall manpower requirements to warrant inclusion in the other two groups.

Some thirty individual occupations, about two-fifths of the total number, are included in the high growth group. Over half of these occupations are in white collar fields with the professional and technical occupations predominating. It is a reasonable conclusion from this data that the largest single group of high-growth occupations are the ones for which college education or graduation is the typical requirement. Service occupations are the next largest group in the high-growth category. These estimates are in keeping with the changes in the occupational structure since World War II.

The occupations in which rapid increases are projected tend to be associated with the pursuit of four goals--health, research and development, and, to a lesser extent, education and transportation, High growth rates are also anticipated for social

TABLE 3

OCCUPATIONAL GROWTH PROFILE, 1964-1975

White Collar Occupations:	I. High Growth Occupations	Salaried managers
Air pilots and navigators		Cashiers
Architects	Personnel and labor relations	Office machine operators
College presidents, professors	workers	Secretaries, stenographers
and instructors	Physicians and surgeons	and typists
Dentists	Social, welfare and recre-	Stock clerks and
Designers and draftsmen	ation workers	storekeepers
Engineers	Technicians, electrical	
Librarians	and electronic	
Natural Scientists	Technicians, medical and	Sewers and stitchers,
	dental	manufacturing
Blue Collar Occupations:	Technicians, other	
Excavating grading and road		
machinery operators		Policemen, sheriffs
	Attendants, auto service and	and marshals.
Service Occupations:	parking	Practical nurses
Attendants, hospital and other	Deliverymen and routemen	Waiters, bartenders and
institutions		counter workers
Barbers, hairdressers and	Charwomen, janitors and porters	
cosmetologists	Cooks	
	Firemen, fire protection	Bookkeepers
White Collar Occupations:	(1)	
Accountants and auditors	II. Moderate Growth Occupations	Plumbers and pipefitters
Lawyers and judges		Stationary engineers
	Pharmacists	Toolmakers, diemakers
Blue Collar Occupations:	Teachers, elementary	and setters
Brickmasons, stonemasons and	Teachers, secondary	Truck and tractor drivers
tilesetters		Welders and flame cutters
Cranemen, derrickmen and	Machinists and job setters	Laborers, except farm
hoistmen	Mechanics and repairmen, auto	and mine
Electricians	Mechanics and repairmen, other	
Foremen	Painters, construction and	

Table 3 (continued)

	Low Growth Occupations	
Service Occupations: Guards, watchmen and doorkeepers		
White Collar Occupations: Self-employed Shipping and receiving clerks	Telephone operators Insurance and real estate agents and brokers	Salesmen and sales clerks, retail trade
Blue Collar Occupations: Cabinet makers and pattern makers Carpenters Linemen and servicemen, telegraph telephone and power Locomotive engineers	Printing craftsmen Tinsmiths, coppersmiths and sheet metal workers Assemblers Brakemen and switchmen, railroad Bus drivers	Checkers and inspectors, manufacturing Filers, grinders and polishers, metal Laundry and dry cleaning operatives Mine operatives and laborers Painters, except construction & maintenance Taxi drivers and chauffeurs
Service Occupations: Private household workers		
Farm Occupations: Farmers and farm managers	Farm laborers and foremen	

(1) The high growth occupations are those for which the increases listed between 1964 and 1975 are at least one-third greater than the percentage increases projected for total employment. (i.e. they are estimated to increase by at least 33% in the benchmark estimate and at least 58% in the estimate for the aspiration goals).

The low growth occupations are those for which the projected increases are less than two-third of the percentage increases in total employment (i.e. they are estimated to increase by less than 16% for the benchmark estimate and less than 29% in the estimate for the aspiration goals).

The moderate growth occupations are those for which the projected increases fall between the two other groups (i.e. between 16% and 33% for the benchmark estimate and between 29% and 58% for the aspiration goals).

welfare and recreational workers, for salaried managers, in many types of clerical work, and for occupations which are likely to be in significantly greater demand because of the expected increase in average family income-barbers, hairdressers, and cosmetologists are an example.

Most of the moderate growth occupations are in the blue collar group. However, over half of these occupations are in the high-or low-growth categories. Employment in many of the blue collar occupations is heavily influenced by public and private expenditures associated with two goals--housing and urban development. Painters, brickmasons, or electricians are examples. Laborers, a low-growth occupation in the 1947 to 1964 period, are expected to shift to the moderate growth category in the projections for 1975. This change stems from the larger volume of expenditures likely for housing, urban development, natural resources conservation and development, or expanding and modernizing our industrial plant in the next decade.

The growth rates for elementary and secondary school teachers fall into the "moderate" growth category. Projections of modest increases in elementary and secondary school enrollments are the primary reason for the "moderate" designation. However, the moderate growth rate designation for elementary and secondary school teachers represents an absolute increase of over a million schoolteachers for the education goal.

Many of the occupations in the low-growth group are in areas where technological change, shifts in consumer spending, or changes in wage rates can be expected to retard growth or to reduce employment. Because of technological change, employment for printing trades craftsmen, for example, is expected to grow slowly, and the economy's requirements for mine operatives are projected to decline. Employment for private household workers is also likely to grow slowly as expansion in other better paid job opportunities pushes up hourly wages in the alternatives available for domestics. Employment is projected to decline in farm occupations so that the "low-growth" classification for these occupations is something of a misnomer. The projection of a decline in farm employment is consistent with trends in employment since 1947. The reasons for the projected decline, as for the historical trends, are the rapid increases in productivity in agriculture, together with the tendency for consumers' expenditures for food to increase at a slower rate than total personal consumption expenditures.

The designation of occupational growth prospects in the growth profile refers to the future, and the classifications, accordingly are surrounded by a margin of uncertainty. We do not know which combinations of goals will receive first claim on our society's resources in the next decade or by how much. If history were to repeat itself, and there is no good reason why it should, the economy's output would grow by less than the 4.5 percent a year taken for granted in our economic framework. However, the occupational projections suggest a relevant conclusion. As we utilize the economy's growth in resources over the next decade to transform more of the nation's aspirations into reality, our manpower problems are likely to concern ways and means of improving education and training, or of encouraging mobility, rather than the issues posed by the presence of a large mass of unskilled, poorly educated, and unemployed Americans. While the pressures for additional manpower, and for the educational and training facilities to prepare them, are likely to be greatest in the professional and technical areas, the occupations with high or moderate growth classifications cover the spectrum of occupational skills.

Implications for Vocational Education

The overall bearing of our manpower projections is to suggest that, whatever the particular combinations of priorities our society adopts in the next ten years, planning for manpower needs in the 1970's must reckon with the impact of pursuit of our priorities as a dynamic influence for manpower requirements. Programs for conserving natural resources, or developing an adequate mass transit system, or reducing the prevalence of poverty serve social values. They also contribute to economic growth and the demand for labor. The growth in demand for scientists, engineers, and technicians, or for physicians, nurses, and hospital attendants, or for electricians, plumbers and laborers, in the next ten years is very likely to reflect the vigor with which the nation pursues its goals.

In the past, planning to take account of the impact of pursuit of national objectives for manpower needs or for our educational and vocational training systems has sometimes been assigned a secondary role. The Committee on Utilization of Scientific and Engineering Manpower at the National Academy of Sciences, for example, reported to President Johnson in 1964, probably with the space program in mind, that:

> In view of the way in which certain government decisions have radically altered the ... deployment of scientists and engineers in recent years, it might be supposed that major decisions have been preceded by careful studies of their probable impact .... Yet, so far we can learn, no adequate studies ... were in fact made before the decisions were taken.[4]

More recently, government agencies, and especially the National Science Foundation, have undertaken intensive studies of the economy's utilization and training of scientists and engineers. Since the period of rapid expansion in the space program in the early 1960's, the same concern that our manpower planning, and the related educational planning are inadequate, has become evident in connection with Medicare. New and far-reaching programs in health care make it apparent that the growth in demand for medical servies which can be anticipated in the next 5, 10, or 15 years is unlikely to be satisfied without a substantial increase in the number of physicians, and in the number of persons in a large group of health occupations including nurses, medical technicians, nurses aides, and hospital attendants. We estimate that achieving our goals in health by the mid-1970's would involve requirements for an additional 160,000 physicians, and additional 500,000 nurses, and 150,000 more medical and dental technicians. In 1965 there were some 18 or 20 new medical schools under construction or well advanced in the planning stage. If these medical schools were all large ones, they might graduate as many as 100 physicians each a year, or a total of under 2,000 additional doctors. Recognizing that present educational facilities are unlikely to make for increases in supply which are close to the rapid increases in demand expected for persons in the health occupations, President Johnson, shortly after the enactment of Medicare in 1966, established the National Advisory Committee on Health Manpower to recommend "Bold, imaginative ways" to improve the utilization of health manpower, and "to speed up the education of doctors and other ... health personnel without sacrificing the highest quality of training." [5]

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[4] Toward Better Utilization of Scientific and Engineering Talent, Report of the Committee on Utilization of Scientific and Engineering Manpower, National Academy of Sciences, 1964, p. 13.

Increasing the supply of manpower in the health fields, in R & D and in other professional and technical occupations can be expected to involve a massive expansion in facilities and enrollments in higher education. Enrollment in all institutions of higher education, in Fall, 1963, was about 4.5 million. Achievement of the education goal is estimated to increase this figure to 9.5 million by the mid-1970's. This projection implies that 1.3 million persons will be receiving degrees for completing 4 or more years of college in 1975. About a million persons are expected to receive bachelors' or first professional degrees, almost a quarter of a million would be receiving masters or second professional degrees, and 34,000 are listed as the recipients of the Ph.D. degree or its equivalent. These estimates compare with the 550,000 degrees awarded in 1963 including some 91,000 masters or equivalent, and 11,000 Ph.D.'s. To achieve our goals in the next decade, therefore, would involve an increase in college enrollment of 5 million and an increase in degrees awarded of three-quarters of a million a year.

The largest percentage increases in enrollments and degrees in higher education are expected in graduate and professional schools, and also in community colleges. Rapid growth in professional and managerial occupations is the basic reason for the anticipated increase in graduate and professional enrollment. However, some of the most rapid growth in manpower needs in the next decade is likely to take place in the new technical occupations, i.e., in the fields such as electrical and electronic technicians, programmers, or for medical and dental technicians. Preparation for these rapidly expanding new occupations can be expected to involve a shift in emphasis in vocational education from non-theoretical skill training offered in high schools to two-year post-high school institutions offering programs combining basic education with technical studies. Community colleges and, to a lesser extent, technical institutes, have concentrated on preparing individuals in the technician occupations, and in related semi-professional fields such as engineers' aides, or for careers in the graphic arts. Coping with the growth in demand for persons trained to enter these occupations is likely to involve many further developments in the number and in the caliber of the two year post-high school institutions. Enrollment in community colleges increased from 325,000 in 1953 to almost 620,000 in 1963. To prepare young people for technical occupations, and also to provide two years of low-cost general education to many other students, enrollments in community colleges in the projections for the education goal are projected to reach 1.7 million by 1975. Allowing for an increase of 25 percent in average enrollment per school, about 400 more community colleges would be needed by the mid-1970's, an increase from close-to-600 in 1963 to close-to-1,000 in 1975.

Much of the increase in manpower needs stemming from the interrelated forces of economic growth and pursuit of our goals in the next decade will represent requirements for blue collar and service workers, and for white collar employees in occupations in the past have been formal apprenticeship, vocational education in the high schools, on-the-job training in industry, and, more recently, the retraining programs sponsored by the Federal Government.

While it is likely that formal apprenticeship programs will continue to serve as an important source of training in some skilled crafts in the 1970's, and especially so in the building trades, it is also probable that enrollments in these programs will continue to decline in the next decade. The number of registered apprentices in training diminished from a total of 251,000 at the beginning of 1950 to 163,000 at the beginning of 1964. As a percentage of the average employment in the craftsmen group of occupations, this represents a decline from about 3 percent in 1950 to 1.8 percent in 1964. The decline could be expected to slow down, and perhaps to reverse itself, if existing apprenticeship programs were to be re-examined in the light of changes in the technology affecting individual occupations, and also in the light of changes in vocational training techniques with a view to taking advantage of these changes to seek ways and means to shorten the average period of apprenticeship in many occupations.

Some 4.6 million students were enrolled in federally-aided vocational education programs in the public schools in 1964. Substantial efforts are currently under way, aided by the changes introduced by the Vocational Education Act in 1963, to relate high school vocational training more closely to the nation's job development needs. In the past, the relationship between vocational education and labor market needs has sometimes been obsure. In 1964, for example, almost half of the federally-aided vocational enrollment was in home economics courses, and almost a fifth was made up of enrollment in courses in agriculture. Among women, according to the 1964 Manpower Report of the President, relatively little use was made of high school courses in home economics in gainful employment although these courses were undoubtedly significant in preparing young people for a future life as homemakers. The courses in agriculture constitute preparation for the one major group of occupations in which employment is projected to decline sharply in the next decade.

Some of the most important developments in recent years in relating education to manpower needs have taken place outside of the regular educational institutions although often working in close collaboration with them. These are the new, largely federally-supported programs for training, and retraining primarily in aid of the unemployed and the disadvantaged. In fiscal year 1966 federal appropriations in aid of these programs amounted to close to $2 billion dollars. The $2 billion supported the training and basic literacy education conducted under the auspices of the Manpower Development and Training Act, the work experience programs for unemployed parents of dependent children, the Neighborhood Youth Corps, the Job Corps, the vocational aspects of the community action programs conducted by the Office of Economic Opportunity, vocational rehabilitation for the handicapped, and similar activities.

By 1975, it is anticipated that retraining and basic literacy programs similar to those currently authorized by the Manpower Development and Training Act will involve expenditures of $3 billion a year for trainees' allowances, instructional costs, social service aid, and research. Through these programs we are developing an elaborate para-educational system in the United States concentrating on vocational education and basic literacy training for young adults.

As the more rapid pace of technological change since World War II continues and possibly accelerates, the federally-aided programs can be expected to play an increasingly important role. They can be especially significant in increasing and upgrading employment opportunities for non-whites. In 1965, the most recent year for which data is available, about a third of the trainees in the programs conducted under the auspices of the Manpower Development and Training Act were nonwhites. Creating more and better job opportunities for nonwhites, and for individuals who are generally unemployed or with poverty incomes, is itself an important aspect of our nation's goals.

However, for the hardcore unemployed, and for persons lacking in basic literacy or in job skills, vocational training, by itself, is usually not enough, and it is likely to constitute an incompleted dead end. The need for adapting these programs to the special problems and the culture of the hardcore is underscored by a survey of unemployed, unskilled Negroes in Norfolk, Virginia in 1963.

The survey noted that "the older males are steadily displaced from muscle jobs ... (and) the young men ... cannot get the crucial first job." Yet the individuals surveyed had almost unanimously rejected the initial invitation to apply for available MDTA training courses. There was great difficulty in identifying and establishing contact with potential applicants since, to these individuals, "word that someone is tracing them means a grim guess as to whether it is a bill collector or one of the many arms of the law." [6] Before social service assistance was added to the training programs, personal and family troubles prompted many of the trainees to become training dropouts -- to leave before the course was finished.

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[6] The New York Times, (May 24, 1963), I., pp. 1, 40.

Trainees who had finished the vocational course began to find work only after they had learned to read and write.

The authors of the Norfolk survey concluded that the needs of the unskilled unemployed require a multidimensional program combining training, literacy education, and social service assistance. Programs concentrating on vocational training for well-qualified applications, the study pointed out, "ignore the most disadvantaged, service the most ... promising, and increase the gap ... between those at the top and those at the bottom of the barrel of the lower class."

These findings were part of the reasons which led Congress to amend the Manpower Development and Training Act in 1963 by authorizing up to six months of basic literacy education for the unemployed. However, to adequately compensate for the cultural and social deprivation in the urban slums, basic education, as President Johnson pointed out in his 1965 Message on Education, "must begin with the very young." Yet, in the mid-1960's, almost half the public school districts conducted no kindergartens. In addition, developing a teaching staff to reach and teach these students will probably require a new type of teacher -- a person who combines the traditional skills of the classroom teacher with the insights of the social anthropologist, and with the techniques which have proven effective in professional social work.

To return to education, our study of national goals indicates that it would probably require an expenditure of $86 billion a year (in 1964 prices) by the mid-1970's to achieve all of our objectives in education. This means an increase of over $50 billion beyond the $31 billion actually spent in 1962. If these objectives were to be realized, spending for education would grow from 5.5 percent of GNP it constituted in 1962 to about 8.5 percent of the trillion-dollar gross national product anticipated in 1975.

An increase on the order of $50-odd billion in expenditures for education to meet needs for improving educational opportunities for more students is large but it is not Utopian. Assuring that our future manpower needs for doctors and social workers, teachers and engineers, or for plumbers and cooks are met, depends on education. Expanding educational opportunities and creating new types of opportunities make up the strategic ingredient in our programs for coping with poverty and racial discrimination. And, the prospects for world peace in a nuclear age intensify the need for more general education to promote our cultural performance, and for more technical education to add to the skills required to increase our economic strength.

CHAPTER V

OBTAINING OPTIMAL EDUCATIONAL OPPORTUNITY FOR DISADVANTAGED GROUPS

Robert D. Hess*

Hess discusses three problem areas facing educators. First, he examines the issues and assumptions underlying contemporary education programs designed to provide optimal educational opportunity for all students. Second, he shows the effect of such programs upon culturally and socially disadvantaged children.

In addition the author discusses the broader social problems involved in upgrading educational opportunities for the disadvantaged youth. For example, he indicates that education for disadvantaged youth should be a cooperative endeavor. It involves community, school and family partnership for optimal educational opportunity.

Introduction

A quarter of a century ago a significant book by Warner, Havighurst and Loeb, Who Shall Be Educated? (1944), described and documented the fact that the educational resources of this country are not equally available to children from middle and working class socio-economic levels of our society. This was the first of a group of publications by Allison Davis, Robert J. Havighurst, and Lloyd Warner dealing with the relationships among ethnicity, social class and academic achievement, which includes Davis' illuminating essay, Social Class Influences Upon Learning (1961). The central themes of their work are well known and clear: children from middle class homes receive better education (as well as other rewards of the society) than do children from so-called working class backgrounds; they earn better grades and score higher on standard tests of intelligence and achievement; children from working class families are less likely to go to college even when they have proven academic talent; these differences reflect native ability of the children involved less than they express inequalities in opportunity available to different sectors of American society.

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The implications of the work of Davis, Havighurst, and Warner were ignored during the recovery and return-to-normal periods after World War II. Within the last five years, however, the problem has been brought into the center of national concern. For the first time in American history, large scale resources at all levels of political and academic life are being oriented toward the crisis created by social inequality in education.

The idea that there are groups of the society who are educationally disadvantaged and who are less adept in academic tasks is by no means new, nor was it a novel concept twenty-five years ago. The contribution of Davis, Havighurst, and Warner was not only to describe in more systematic fashion the nature of the problem but to show that it was rooted in a social system which sanctioned and perpetuated it.

What is new about the problem that deserves a place in the discussions of this conference? The new look to this old topic seems to me to come from several circumstances of contemporary American life. The first of these is the explosive combination of crowded urban living conditions, semi-literacy, poverty and racial discrimination in a society that is obviously wealthy, is suburban in its values and which professes to be free. A second is the decrease, within the society, of jobs which can be filled by semi-literate adults. Another is the focussing of attention upon the educational deprivation of American Negroes. A fourth is the increasing effectiveness of Negroes as a political power in the United States.

The resulting social, economic, and political problems have forced the nation to undertake seriously the task of providing some remedy. The contemporary national efforts are thus rooted both in apprehension and social concern. It is not surprising that the dominant feature of the new look in compensatory education is the demand for action--action that is now made possible by huge fiscal allocations from private, state and federal sources.

In keeping with this spirit of action, the orientation of this conference, and of this paper, is toward implementation. The desirability of change has been accepted. It may be useful for your purposes, however, to examine the assumptions that underlie attempts to implement the concept of equal or optimal educational opportunity and to inquire why we should expect to provide it successfully at this point in history when equality has never before been achieved. In reviewing this task, I would like to include some comments and findings from recent research on the effects of cultural and social disadvantage on educability and learning and to comment briefly on the implications of these new findings and theories for programs of implementation.

This paper, then, is concerned with three questions: First, what are the issues and assumptions in contemporary major programs designed to provide optimal educational opportunity? Second, what is the effect upon children (from the viewpoint of education) of cultural and social disadvantage? Third, what are the implications of recent theory and research for current programs of compensatory education?

Some Issues In Comtemporary Compensatory Education Programs

To be disadvantaged[2] is by definition a relative condition. We are probably all disadvantaged in some way in relation to some other person or group. As is often the case with terms used to designate social categories, the word is a euphemism, intended to conceal some of the underlying connotations it carries. As it is now being used in the field of education, it refers to a number of groups which have been in previous times called by other names--"deprived," "lower-class," "underprivileged," or simply "poor." It is obviously not a precise term. It reflects inversely the general lines of prestige and privilege in the society. The essential point of the concept of disadvantaged groups is that there are social, cultural, and economic circumstances which act systematically (that is, predictably and consistently) to prevent children in certain places and with certain characteristics from obtaining adequate education, income, and dignity. In this sense, disadvantage is a group phenomenon. In a more accurate usage, however, disadvantage may refer to any condition which prevents an individual from being educated to the maximum of his genetic potential.

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[2] It seems useful to distinguish between disadvantage which is occasioned by social and cultural discrimination and disadvantage which is geographical in origin--as in the lack of adequate schools for children in rural and isolated regions. Both are handicapped by conditions which have nothing to do with their ability, but the solutions for children subject to discrimination are much more complex and difficult to achieve.

In planning and assessing programs of compensatory education, it is important to recognize the fact of individual differences within disadvantaged groups. There are many children in such groupings who do well possibly because of greater ability or because they are less subject to the crippling of their environment. Also, there are large differences in ability to gain from programs designed to raise educational achievement. Occasionally one gets the impression from hearing reports and plans of experimental programs that if adequate education were available, all children in such programs would complete college and continue into graduate school. Obviously, when full opportunity is afforded every child, there will still be large individual differences in ability and achievement based not upon discrimintion or artificial disadvantage but upon biological grounds. To make these familiar points is to remind us that we should be realistic as well as optimistic in our planning and avoid the double error of assuming that all children in disadvantaged groups are doing poorly in school and that all children will show spectucular gains.

This issue has particular relevance for programs dealing with vocational education or with the problem of whether different educational programs should be provided for children of different ability levels and, if so, at what stage in their education. Basically this is the problem of how to deal with large groups without disregarding the differences among individual members in ability, motivation, and achievement. When we are teaching children who are working below their level of ability because of environmentally imposed handicaps, there is a particular issue: When can we be confident that the performance of a child from a disadvantaged group is representative of his own ability and not a reflection, in some way, of a disadvantage typical of a group. How can a teacher in the slums of Chicago be certain that the child she is working with in a special program has reached a level which reflects his natural ability?

The title for this section of the conference is concerned with "optimal" rather than equal education. I assume that this choice of words was not accidental. The concept of optimal itself seems to carry a connotation of maximizing the natural potential of the individual, in spite of the difficulties involved in assessing progress. It suggests to me a concept of equal opportunity somewhat different from that which we have been using--one in which we are concerned with the product, the outcome, the effect, rather than with making resources available. In one approach, we ask whether good reading courses are available to the disadvantaged child; in the other, we ask if he has learned to read. The emphasis shifts from concern with resources and input to concern with product and achievement. There are valid arguments for taking such an approach with children from disadvantaged homes. The most significant of these is that such children come to school with inappropriate learning styles which make it more difficult for them to learn in any given situation until new learning patterns have been established. The handicap is not only in lack of opportunity but in lack of ability to utilize resources made available to them. The concept of optimal seems to me to take into account this aspect of cultural disadvantage.

Another aspect of the current improvement in educational programs for disadvantaged children is that the introduction of new facilities, superior curricula, better materials and teaching aids has been more rapid and concentrated in the middle class neighborhoods than in the slums and rural areas. New math, foreign language, and other courses which orient the child toward superior education are rarely part of the programs for disadvantaged children. Thus the educational progress of the schools in the middle class parts of the population is probably greater than that of schools in the slums even with new compensatory programs. The present gap in ability and educational achievement between middle and working class children is thus not likely to decrease; indeed it would not be surprising if the gap became greater. In effect the schools in the slums must, like Alice in Wonderland, run as fast as they can merely to stay in the same relative position.

It is interesting to consider the possible impact of compensatory programs upon education, quite apart from the gains that the children in the programs may make. For instance, the focus upon pre-school programs as in Operation Head Start may well lead to expanded programs of early education for all children as a standard part of the school curriculum. Also, it seems likely that the emerging organizational patterns in early education which are based on regional rather than on state lines will influence the activities of state and local structures. The significance of these new units will be discussed in this conference by persons more qualified to comment on their potential effects on the field of education. It is relevant here to note that such efforts have frequently been organized along non-traditional lines. The reasons for this tendency to turn to new patterns is worth examining. Is it possible that local eductional and political systems are not able, for various reasons, to undertake programs of the type and magnitude that are required to deal effectively with disadvantaged groups? If so, the problem of obtaining optimal education for underprivileged children has administrative and organizational considerations that go well beyond the scope of this paper.

It may be instructive and relevant to consider the programs for disadvantaged children that have emerged, the philosophies on which they are based and the progress that has been made. Although no formal assessment of these programs has been made, the evidence of their effectiveness is beginning to appear in more substantial form and there are a number of projects intended to provide more information about procedures and curricula. This evidence will help give a more precise picture within the next year or two.

One of the impressive features of compensatory education programs is the multiplicity of funding sources and of administrative structures through which programs are launched and operated. Much of the initial impetus came from foundations, private sources, charitable agencies, and churches; and private funds still support a large number of programs in whole or part. State and city programs in whole or part. State and city programs have been involved also, often with the assistance of foundation funding. Several cities have taken an active role, again often in partnership with federal or foundation funds. As the notion of compensatory education grew in popular public appeal, the federal government began to dominate the field and is now supplying a very high proportion of funds for compensatory programs and for research in related fields. It seems unlikely that there will be much change in this general pattern, although the assessment of the effectiveness of programs developed with the use of federal money may eventually induce changes in scope or in patterns of administration.

One of the gratifying features of the growth of programs for disadvantaged children is the large numbers of volunteers (the exact numbers are not known but are probably in the hundreds of thousands) who organize and staff volunteer programs or participate as unpaid workers in financed programs. The total involvement of volunteers would be even greater if they were not explicitly forbidden or discouraged by school systems. These efforts obviously show individual concern, but perhaps more importantly, they express indirectly some feeling of dissatisfaction with the accomplishments of the educational systems of this country. The effects of this mass volunteer participation are impossible to assess, though individual case histories are impressive. Possibly the most substantial effect is a more active involvement by volunteers in the total educational activities of the community. Hopefully, these volunteer programs will stimulate school systems toward more innovation and imagination in dealing with underprivileged pupils and their families.

A less encouraging feature of the current compensatory education programs is a lack of coordination among agencies serving the same audience. It is possible for a single family in the slums to be engaged in exchanges of one sort or another with a private social agency, a city or state welfare program, a social work project supported by federal funds, a state controlled manpower re-training program, the Jobs Corps, Operation Head Start, a private tutoring program, a public health program, a public housing agency, a university based research project, and a literacy program (this is not an exhaustive list) with little or no coordination or communication among the schools, churches, universities, welfare agencies and other groups who are attempting to effect change of some sort in the lives of the family members. While there are advantages to pluralism in society, a question may be reasonably raised as to the effectiveness of such overlapping in the administration of funds and activities oriented toward a common objective. It is relevant to ask what the effect on the family is likely to be--whether it contributes to the self-respect and dignity and to feelings of efficacy of the persons subjected to these treatments.

Perhaps because of the relatively short period of time in which they have been operating, programs of compensatory education have a variety of philosophies and theories or, in many instances, have no explicit theory or concept on which to base curricula or techniques. There is a general concept of deficit--that the child has missed some critical experience or has had too little stimulation and that the best method of dealing with his problem is to expose him to middle class experiences and ideas. With adults particularly and with small children there is an emphasis on learning to read, based on the argument that reading is the key to education and that it will open educational and occupational doors. There is, however, little theory based on an understanding of the experiences of the disadvantaged child, his problems and resources. The arguements of Allison Davis that the child has been socialized into a different culture and that his disadvantage reflects the social structure of the society in which he lives seem to have been largely ignored.

It is too early to make an accurate assessment of the effectiveness of programs for disadvantaged children, although some have been carefully evaluated (Gray, 1966). There have been many informal reports and some research results which indicate considerable success in raising academic performance of children in such programs. Other reports have been less glowing. At this stage in our experience it is inadvisable to attempt a general evaluation. However, the reports available indicate that while a great deal can be accomplished, the task is not simple or easy and we should not expect dramatic accomplishments over short periods of time. Indeed, there may be gains from compensatory education programs which are difficult to measure and which may have positive effects upon later learning. Whatever the results may be as the formal assessments begin to acculdulate, there can be no retreat from the position that the nation has taken--that the educational level of disadvantaged groups must be raised as quickly as possible. The issues now have to do with implementation.

One of the most significant features of the current effort to provide optimal educational opportunity is the changing role and positions of Negroes in the country. The salience of Negroes in compensatory programs (and the relatively low involvement of other minority groups, particularly American Indians) is one evidence of the increasing importance of Negroes as a political force in the United States. In dealing with working class Negroes we are accustomed to working with poverty; we must now become accustomed to both poverty and power, though hopefully the degree of poverty will decrease. The urgency that is now felt with respect to equal education for Negroes will almost inevitably affect compensatory education programs. Perhaps the most obvious effect will be that programs may be devised in haste and accepted with too little critical review. It would appear to be essential to maintain a tentative and exploratory attitude in adopting programs, lest inferior and untried techniques and materials be institutionalized and perpetuated in educational systems.

Another side effect of the power and identity of Negroes in the struggle for equal opportunity is the possibility that children may become aligned against the white institutions and develop antagonism against the school and the educational system.

There are instances of children being used by civil rights groups to pass out materials criticizing teachers, principals and superintendents. Without raising the question of whether the school system involved deserved criticism, there is a profound issue of how such open opposition affects the learning process in the classroom and how such breach of trust between teacher and learner can be healed. Hostility toward a school or teacher, whatever the cause or justification, makes a poor base for teaching and for identifying with the spirit of objective inquiry that the teacher and the school are designed to promote. This is a problem which has received little attention and little comment, but which may become critical and necessitate basic modification in the planning and administration of educational programs, both compensatory and standard.

The Effects of Disadvantage Upon Educability and Learning Process

It has already been suggested that a comprehensive program for obtaining optimal education for disadvantage groups should be based on a conceptual and theoretical orientation that takes into account the nature of social and cultural disadvantage and the effects of disadvantage upon the academic abilities of the children involved. This section of the paper is thus concerned with the impact of cultural experience (especially that which we term deprived or disadvantaged) upon educability. As it is used here, educability refers to a mingling of orientations, skills and motivations that prepare the child to learn in a formal instructive setting--usually the school. It includes at least these aspects: motivation to achieve and to learn in a classroom or other setting; cognitive skills such as language, concept formation, reading, etc; and acceptance of the role of pupil expressed in an understanding and acceptance of the purpose of the school, a degree of cooperation with the teacher and other school authorities, and a willingness to adapt in group situations. The concept of optimal education is obviously closely involved with the concept of educability. Educability is seen as a prior condition, a preparation which normally precedes formal school experience in which the young child is oriented toward the school and toward learning. It is the basic sub-structure upon which the teacher can build. If it is undeveloped or if it is distorted in significant ways, the teacher must either alter her task (in order to develop educability) or face frustration in her attempts to teach.

The development of educability clearly assumes an acceptance of the behavior and values of the school by the community, and by the child's family, especially the mother, who is most critically involved in the early orienting of the child toward the school. In a disadvantaged group, the expectations of the teacher for social and academic performance are often not shared by the family, not because of a basic conflict in values but because of a different orientation toward these activities and a lack of understanding on the part of the mother as to the qualities which promote learning in children. The central difficulty is not one of conflict or antagonism (at least not at the present time) but of difference in emphasis and of misunderstanding about the role of pupil. From this standpoint, the lack of preparation which the disadvantaged child displays is less a matter of intelligence or even of formal education on the part of the mother than it is the acquisition of maladaptive orientations to authority, the school, and the learning process that are reinforced by the home and community environment.

The concepts and findings reported in this part of the paper are taken from a larger study, begun over four years ago. It was designed to examine the cognitive environments of urban preschool Negro children and the effects of these environments upon the educability of young children. The more general problem to which the project was addressed was to understand what cultural disadvantage means in terms of family and community interaction and how the experiences involved in working class Negro life are translated into academic achievement. In this effort, social class differences of the sort described profusely in the educational literature are a starting point from which to examine the specific experiences and interactions affecting the child's motivation and cognitive capabilities.

It is relevant in this context to think of education as a socializing experience in which the child is taught the values, skills, beliefs, and knowledge of the adult society. Under this model, the child is trained toward adult schemata of thought and action. When these are adequately mastered, the child is accepted as a recognized and equal member of the community, and the rewards and privileges, as well as the responsibilities, of adulthood become his. This view sees the formal educational process as one which continues the initial socialization begun in the home, with the school acting for the community in its role as socializing, or teaching agent. It is this delegation of authority to the school that establishes and continues the right and obligation of adults in the community to exercise ultimate control, through lawful procedures, over the activities and policies of the school.

This model does not fit the socially disadvantaged child. Because disadvantage is associated with discrimination or prejudice, the typical route of socialization is not available to him. He learns this by indirect experiences and teaching, however, and because he soon senses that there is something basically false and deceptive about what he is being told and taught, he becomes resentful and mistrusting of the school and the process of education. Because he cannot understand his experience nor give lucid expression to his anger, his response is frequently to become apathetic or to become aggressive by raising hell in the classroom or the community in ways that are eventually, often self-defeating.

The disadvantaged child (and here I refer especially to working class ethnic and racial groups) grows up in a social and cultural setting which teaches him ways of adapting to the world and ways of perceiving his environment which are in basic aspects different from the middle class culture of the school and the goals of the dominant society. He comes to the school not only deficient in language skills and in ability to discriminate auditory and visual input but with a pattern of behavior which is not readily adaptable to school life. The alienation which is characteristic of disadvantaged groups has begun before he reaches the classroom and his modes of adapting to it have given rise to behavior that will not typically make for school success. From this point of view, the disadvantaged child presents a problem in *acculturation* rather than socialization. The school must thus serve as a re-socializing as well as a socializing unit. This is a critical point to be considered in the planning of programs for disadvantaged children. The concept of deficit--that is, that the deprived child has had too little of the good things in life--is valid only if it is also recognized that the experiences and learning he has had are different in kind from the mainstream of social and cultural experience in this country. If this general position is valid, it is obviously not sufficient to regard equal educational opportunity as offering resources, without considering the readiness of the child to utilize them. It should also be noted, parenthetically, that the motivation of parents (or of teachers for that matter) is not necessarily at issue. I believe that we have grossly underestimated the desire and effort on the part of parents of disadvantaged groups to obtain good education for their children.

In order to make more explicit these views about the early orientation of the child to educational experience, we conceptualize the role of family adults as teachers. From the adults and older siblings in his environment, the child begins to learn ways of sorting and ordering the mass of information that reaches him through his several sensory modalities. He develops categories of thought and ways of dealing with information. These ways of dealing with stimuli may be seen as information-processing strategies which help him order and understand the stimuli which reach him.

Many of the disparities in cognitive and scholastic performance that appear among different cultural and socio-economic groups in the United States can be understood in terms of the differences in the types of information-processing strategies learned in early experience in the home. Perhaps more fundamental is the view that the position the family holds in the social structure of the community determines to a degree the techniques children will be taught to use in dealing with the informational environment. Perhaps the most important element is the range and number of alternatives for thought and action that are available in the community to the family and its members. The degree to which alternatives for thought are available is related to the family's position in the community. A family in a ghetto has few choices to make with respect to residence, occupation, condition of housing and the many other alternatives available through adequate income. Life consists of a struggle against the environment, of wrestling and seeking for basic commodities, rather than an array of choices from which rational and thoughtful selection can be made. Families in these circumstances are not likely to encourage their children to regard life as consisting of a wide range of behavioral options among which they must learn to discriminate.[3]

In the project being described, a research group of 163 mothers and their four-year-old children was selected to provide variation along four dimensions: socio-economic background, type of housing, economic dependency status, and intactness of family. All subjects were Negro, non-working mothers. The criteria for selection of the subgroups and the composition of the groups were these: Group A came from college-educated, professional, executive, and managerial occupational levels; Group B came from skilled blue-collar occupational levels with not more than high school education; Group C came from unskilled or semi-skilled occupational levels with predominantly elementary school education; Group D also came from unskilled or semi-skilled occupational levels with predominantly elementary school education. In Group D, however, fathers were absent and families were supported by public assistance. The IQ levels of the groups follow familiar social class patterns, ranging from a high of 110 for group A to 82 for Group D. The IQ levels of the children were roughly comparable; except that the children of Groups C and D scored roughly 12 points above their parents.

The mothers of the groups were interviewed in their homes, then both mothers and children were brought to the University for testing and for a mother-child interaction session that required the mother to teach the child three simple tasks that she had been taught by a project staff member. One of these tasks was to sort or group a number of plastic toys by color and by function; a second task was to sort eight blocks that differed in color, size, shape and markings by two characteristics simultaneously; a third task required the mother and child to work together to copy five designs on a toy called an Etch-A-Sketch. We are now engaged in a follow-up study to discover whether maternal behavior, as we measured it, is related to subsequent success in school.

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[3] This point is closely related to the theoretical formulations of Basil Bernstein (1961), whose writings have given new and useful directions to research on social learning.

The findings of this project have been reported in some detail in other papers and will not be repeated here (Hess and Shipman; 1965, 1966 a, 1966 b). I would like, however, to summarize briefly some of the findings that came from the project because of their relevance to the topic of this section of the conference. We were especially interested not only in the mothers' techniques for orienting the child to the school and to the teacher but in her own image of the school and the personal qualities she thought would produce success in the classroom. Using a set of rating scales, we assessed the mothers' attitudes toward the school and toward their own role in relation to the task of the teacher. The first factor that appeared in analysis of these data was a cluster of items which suggest frustration, futility, and the uselessness of attempting to change either the system or the unruliness of children. Mothers from working class backgrounds were significantly higher on this factor than were mothers from the middle class. In analyzing further these expressions of powerlessness, it appeared that they were also related to the child's ability on cognitive tasks. That is to say, that the mothers who felt relatively impotent in relation to the school had children who were less likely to achieve in academic-like situations. At the same time, they clearly valued education and expressed approval of academic programs which demanded much of the child and kept play and supplementary activities to a minimum.

Another opportunity to describe the school was provided by the question: "If you had the power to do as you wished about education in the school, what would you do?" In response to this query, roughly half of the mothers from working class homes either voiced no criticism of the school or said that they had not thought about it. Only 18 percent of the mothers from middle class homes were without suggestions for improving the local school system.

The feeling of powerlessness and the lack of criticism seem to us to be related to an acceptance of the status quo and of the authority of the system, indicating a resignation to forces believed to be too powerful to modify. Feelings of passivity also appeared on other questions about the community and test items showing situations in which the mother and teacher were in face-to-face conversation, even though the topics of conversation was unspecified.

An additional topic of concern was the mother's definition of the role of pupil. Assuming that the child's orientation toward the school and toward the behavior that would be expected of him would be initially transmitted by the mother, we asked the mothers in our study to imagine that the first day of school was approaching: "Your child is going to school for the first time; what will you do, what will you tell him?"

Responses to this question were scored for six categories. The "obedience" category includes responses in which the mother defined school as a situation in which the child would have to behave in a socially accepted and obedient manner toward the teacher and/or his peers; to conform to classroom routine; to follow a set of rules pertaining to health, safety, and property rights; or simply to behave or be nice without a referent for that behavior. For example, a mother in the public assistance group said that she would tell her little girl, "to obey the teacher. Do what the teacher asks her to do and that's all to do or say. Just tell her to sit quiet and listen at the teacher and do whatever the teacher tells her to do and get her lessons." Another, less concerned with school itself than with getting there and home safely, said, "I would tell him to be aware of cars, you know don't step out in front of a car is something that is dangerous. And don't pick up different things that don't concern him. Go straight to school and come straight home from school."

A somewhat less explicit statement of the importance of obedience was given by a lower-lower class mother: "Well, the first time I would tell him to be nice and learn to listen to the teachers and do what they tell him to do and mind," while an upper-lower class mother listed a group of behaviors she expects her child to remember when he goes to school for the first time: "I'd tell him to go straight to school and stop at the patrol lady...don't cross, because she tells you to. Mind your teacher; be nice; raise you hand, and when you have to go to the bathroom ask her, you know, and don't talk in school, don't eat any candy or chew any gum. Be nice."

Middle class mothers tended to elaborate more and to suggest rather than to demand obedience: "I will tell [her] that she is beginning her education. And here she will learn to play with other children. She will learn to listen to the teacher and how to act properly in a control situation such as not talking out any time she wants to....And I will tell her to be very cooperative and do whatever the teacher wants her to do. And try and be friendly and get along with the children." The following middle class mother drew an analogy between obedience at home and at school: "The only thing I will definitely stress to her is authority, that the teacher becomes the authority head. Mother and Daddy are the authorities at home, and that she has to respect and obey the teacher, and likewise the teacher will respect and obey her wishes, and I think this is mainly what I will tell her about it; that there is authority outside of the home and this is it, you are just going into it, your teacher will be your main center of authority at school and you must obey her as I want you to obey me."

A second response category defines school as an opportunity to attain increasing levels of achievement in academic skills. A mother might say, as did one in the public assistance group, "She's going there for to learn things which will help her for whatever she might want to be when she grows up"; a lower-lower class mother said, "I'd tell him that I want him to go to school so that he can prepare himself how to work or help him get a good job."

In addition to defining school as an authority system or as an educational system, some mothers were concerned with beginning school as an emotional or affective experience: mothers anticipated their children's fears of the new and strange experience and they stressed the adventurous aspect of meeting new people and the change in status from baby to "big boy." One middle class mother, concerned with affect, spoke only in positive tones: "First of all, I would take [him] to see his new school, we would talk about the building, and after seeing the school I would tell him that he would meet new children who would be his friends, he would work and play with them. I would explain to him that the teacher would be his friend, would help him and guide him in school, and that he should do as she tells him to. That will be his mother while he is away from home." A public assistance mother was more explicit about the potential negative feelings: "Well, by her being kind of bashful, the first thing I think I'll have to go with her. And tell her that she only have to stay here for a few hours and play with the kids. And everything's going to be fine. And she'll be able to come home. I'll come and pick her up when school is out." An eloquent statement of mixed emotions was given by a lower-lower class mother: "I know he is gonna be ner- frightened, you know, to stay there by himself, uh with the teacha. I just don't know what I would tell him. I try, I'd tell him that, uh, don't be afraid, uh, tell him how nice the teacha is, and uh, tell him, uh, that he gonna have a lot of fun, you know, with the drawin' and everythin', and uh, playin' with the rest of the kids. Lots of kids there to play with--the rest of the children. And I'll tell him that I'll be back for him, and uh, it's fun, it's a lot of fun to go to school, cause he looks forward to goin' to school, but I know that first day, I know how it is that first day, when your mother leave you, you just don't know what to do."

Responses to this open-ended question often constituted or included statements which did not directly answer the question. Mothers mentioned actual experiences the child had had which they felt were helpful in preparing him for school, such as visiting the school or playing and talking about school with older siblings and friends, or actual skills that she had attempted to teach him herself, such as tying his shoes, or learning his ABC's. An upper-lower class mother related that she would tell her daughter "how to undress and pull off her shoes and rubbers and how to go to the washroom, and hang her coat and hat and things like that." Concern for the academic aspect of school was expressed in preparation by a public assistance mother: "I would help her with her ABC's, things like that. I would help her learn to count, you know, and do as much as I could to help her."

It is clear from these comments and from more systematic data (Hess and Shipman, 1966b) that working class mothers tend to stress obedience and are less sensitive to the affective and emotional aspects of the early school experience. Middle class mothers are more concerned with the meaning of the new experience to the child and with giving him ways of thinking about it that will help him master the new situation. They are less concerned that he display good behavior. This attitude is consistent with the work of Kohn (1959) on disciplinary techniques and attitudes of parents from different social classes.

The importance of authority and techniques of control is perhaps even more apparent in other types of responses and when viewing the First Day responses through different categories. In our project we have distinguished three types of maternal control or compliance strategies. The first of these is illustrated by mothers who use imperatives to maintain societal norms and rules. In these families the appeal to the child is based on assumed justice in tradition, in norms of the society, in the status quo. Questioning is discouraged and there is little urge to seek rationale. The norms of the society and the rules of authority figures are to be accepted as given. The second type of appeal is shown by mothers who are oriented toward *internal*, *subjective* states--toward personal and individual rather than group considerations. In these families, the feelings and preferences of the child are given consideration. In effect, the child is brought into the decision-making process if not by actual voice then by having his reactions and viewpoint taken into account by his parents. This contrasts with the first technique, which emphasizes the structure of the system and the morality of external standards. Subjective control urges the child to take the role of another and to see his own behavior from another perspective. The third type of maternal control is exemplified by mothers who are oriented toward *cognitive-rational* appeals. In these situations, the child is taught to look for justification of a rule or a command in the elements of the situation in which it occurs and to discard alternatives by force of reasonable argument (e.g., "You shouldn't talk in school because the teacher can't teach as well and you won't learn your lessons properly.") In these control strategies, the child is less subjected to external power; indeed, power may not appear in the exchange as a significant element.

These strategies lead to complementary orientations on the part of children. In imperative control systems the child is taught to attend to authority figures as enforcers of rules; in subjective regulation techniques the child is oriented toward expressive, internal reactions in others and is more responsive to interpersonal axes of behavior; in cognitive-rational approaches he is more likely to be directed toward interest in the task and in logical principles.

There are striking differences among the mothers of our research groups in their preference for each of these regulatory techniques. Responses to the First Day technique were grouped into categories approximating the imperative and subjective. Imperative comments would be given as an unqualified command: "Don't holler"; "Mind the teacher"; "Do what you are told," are examples. Subjective responses take into account the feelings of the child and of the teacher. On the First Day protocols and on other questions relating to maternal control, the mothers from the three working class groups typically used imperative commands in roughly half of their comments. Mothers from the middle class used imperative in less than one-fifth. Responses in other categories (subjective, cognitive-rational) showed opposite trends.

In short, children from working class homes are taught to attend to the norms, rules and authority figures of the social systems in which they live rather than to inquire, challenge and take an assertive, initiatory stance. This orientation expresses the level of prestige and power of the families in the community. Feelings of futility and alienation on the part of parents are carried into the classrooms as attitudes of apathy and passivity.

The learning styles or techniques which children acquire from their parents are also apparent in more specifically cognitive and problem-solving situations. In our study we asked mothers to teach their children three simple tasks which the mothers had been taught by a staff member. Our aim was to see in detail the type of communication employed by the mother and the methods she used to transfer information to the child. In line with findings on language and test scores we found large differences among the mothers within each of the three groups and between the middle class and the three working class groups. More significant, possibly, is the finding that within the working class groups the mother's tendency to teach the child strategies for problem solving was associated with the child's success on mental tasks in which the mother was not involved. The techniques involved were relatively simple, such as showing the child a design that the two of them were trying to copy, or inducing the child to talk and to ask questions and participate in the problem-solving session. What seems to be learned is a point of view toward mental tasks and teaching. One type of mother provides so little information or provides it in such disorganized fashion that the child is essentially placed into a frustration tolerance situation in which he has little confidence in his own ability or in the ability of his mother to help him achieve. The resulting passivity is a reaction to the feeling of not knowing what to do or to expect next and a desire to avoid error and punishment (Brophy, Hess and Shipman, 1966).

The effect of cultural disadvantage thus results to a significant degree from the attitudes toward authority and rules, toward learning and one's own capabilities, and from the feelings of alienation and powerlessness that disadvantaged adults experience and feel in their day-to-day lives. The consequences for children are evident in the pre-school period and have taken toll before they enter the school. The first grade or kindergarten teacher is faced with a problem which is basically different from that confronting a teacher in a middle class school. Her first task in teaching the child to learn is to use reasoning rather then rules in coping with the school system and the material in the classroom. This is an orientation to which he is typically not accustomed and her task is not easy. In addition, she has to compete with the home and community (including the peer group) in her efforts to orient the child to new learning procedures.

Some Implications for Compensatory Education Programs

The point of view advanced in this paper is that disadvantage and educational impairment of "disadvantaged" groups in American society has been created by the nature of the society itself and that ethnic and social class bias have consequences for the child's ability to absorb, to deal with the school and the information and modes of thought which it attempts to transmit to him. The consequences are not only a lack of skills, vocabulary, and information but are part of one of the most basic human relationships--that toward authority and toward rules, norms and regulations of the society. The teacher's task is to re-teach, or re-socialize, the child into learning styles which will be more likely to enable him to progress beyond the elementary stages of education.

This view of the nature of disadvantage suggests that compensatory education is intervention in a broad and significant sense. It is not merely an attempt to improve the knowledge and academic skills of a specific child. If it is to be effective, it must deal with the larger social problems which create disadvantage. In this sense, providing optimal educational opportunity is social engineering. That is, it is designed to produce change, both individual and collective, in the society. As such, it raises questions which are political, social and economic.

It seems unlikely, if this general view is valid, that successful or optimal opportunity can be provided without engaging the cooperation and participation of the family and the community. That is, the educational problem will be resistant to remedial efforts unless there is coincident involvement of larger segments of the disadvantaged group. The alternative is to attempt to provide individual social mobility for talented children-- an escape route from the disadvantaged circumstances of early childhood. This may be desirable and, to be sure, is an approach that a number of programs are now using. However, it does not deal with the basic problem, nor does it provide optimal education to the individual who escapes or his peers who remain.

Even when the native ability of the child in question is limited, there is good theoretical argument for finding ways to bring disadvantaged groups into a legitimate place in society. The arguments that Pearl and Riessman present in *New Careers for the Poor* (1965) that the service, health, and education sectors of the society should open routes to semi-professional and relatively unskilled roles and jobs is a compelling one. These growing and prestigeful occupational areas may provide opportunities for supplementary jobs which serve the society well and which give prestige and dignity to the individual.

The task of providing vocational and technical education and the role of state departments of education in this effort is clearly critical and significant. The specifics of implementation will vary from region to region and within each state, but the overall goal of providing routes to jobs which engage the individual in responsible, useful and productive roles in the society deserves highest priority if the present barriers of social disadvantage are to be opened by programs of education.

CHAPTER VI
STATE GOVERNMENT AND EDUCATION

Laurence Iannaccone*

In this chapter Iannaccone attempts to meet the theory need in the state politics of education. With a selective consideration of some of the descriptive studies, he offers a taxonomy within which states are classified according to structural type, life style and leadership group. Next, the author includes some of the elements of political change and a summary statement of theory in the state politics of education. Finally, Iannaccone turns his attention toward implications the previous discussion offers the changing role of state education department, e.g. if a state is undergoing political reorganization and the politics of education change with it through the leadership group, the political behavior and the structure of the profession's interest groups will all change together.

Introduction

The statement that we are undergoing a revolution in the politics and governing of education is becoming trite. This does not make it less true. It simply means that it has lost much of its utility as a signal to call our attention to the fact of an increase in the rate of change customarily present in the politics of education. The statement does not offer, and has never had, the power of an explanatory system. What is needed for research or to influence the future of educational policy development in efficient or practical ways is theory in the state politics of education rather than repetition of the catch phrase, 'revolution in educational politics'. The statement may nevertheless have the value of helping to keep us aware of the pervasiveness of the changes underway. As has been pointed out,[1] all governmental agencies of education as well as professional associations and similar extra-legal power holding organizations influencing educational policy are now in process of being modified by this [sic] revolution, state education departments no less and possibly in the long run more than most other agencies. Again, stress on the totality of education's social milieu which is bound to be changed by this political revolution has value. It can help each of the participants shaping educational policy see their opportunity to increase their impact upon such policy.[2] This stress does not, however, offer enough conceptual purchase on the political changes underway in education to serve as even a crude guide for action.

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One may be somewhat more specific as to the nature of the changes now underway without being particularily helpful in serving the interest of enhanced explanatory power. Thus, it may be pointed out that it is the changing relationships between and among our various governments, federal, state and local which are most visible. This does not mean that less visible changes may not be even more significant involving as they do a rearrangement of less formal power centers, teachers associations, entrepreneurial profit-making combines engaged in text publishing, teaching machine production and the peddling of learning gimmicks, as well as the non-profit "growth" combines, the wheelers and dealers, of policy research. The last presents an intriguing study of relatively autonomous and hence (from the point of view of political control) irresponsible power centers, neither bound by tradition nor in many cases by the existence of external stock holders. These organizations of professional problem solvers par excellence and per so many millions of dollars of U.S. contracts represent a genuinely new force in the reshaping of the political relationships of traditional agencies involved in polution, poverty and pedagogy. Even the identification of actors in education's political revolution is of little explanatory help without additional specificity as to where we stand in the so called revolutionary flow of political events in education, to what possible states of affairs we are tending, and more important, to those who wish to influence events, where we *may not* go.

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[1] William W. Wayson, "The Political Revolution in Education, 1965," Phi Delta Kappa, (March 1966), pp. 333-339

[2] Wayson, pp. 333-339

Similarily it is possible to describe this revolution in the politics of education in terms of broad social forces behind it. These may be seen as part of a general world-wide social revolution. The struggle for racial equality or the thrust for power against the caucasian would be listed. One could note the creation of an affluent society with resulting demands for up-ward mobility through education. Not to be ignored is the related mass of urban and metropolitan social problems reaching minor insurrectionary proportions which are inextricably tied to education. The thrust for power to negotiate collectively with boards and superintendents most recently pushing into areas heretofore considered domains of policy and administration which are not negotiable with teachers, whether through N.E.A. sections and related bureau careerists or through the A.F.T., should also be taken into such a listing. A discussion of social forces may be useful in providing awareness of the totality of the social context of a political revolution. It is, however, only as such currents become organized into governmental bodies and actions or into truely revolutionary bodies and actions subverting and replacing established governmental agencies with themselves, that meaningful changes in governmental action take place. It therefore seems more useful to first consider the historic actors in the political arenas, the events producing educational policy and the present state of affairs in this.

Not to be ignored, particularily by those of us more or less holding membership cards in the educational administration and professional association "club", is the role played first by the organized profession in creating the political universe of education and then in producing the present state of affairs. This role may be viewed in two ways. On the one hand, the organized professions contributed as none other to point out the need for major changes in the level of financial support for education. The recent changes in federal spending in education stem in part from the efforts of key figures in the organized profession to point out the need for federal aid. The changes in federal funding of educational ventures constitute a major element in producing a realignment, one only begun as yet, in the political power relationships of educational agencies within states as well as between state and federal governments. On the other hand, the organized profession's cotton candy resistance to educational innovation which could put in pawn the traditional power structures inside public education led to its abandonment by its sometime friends such as Conant and Company. In this connection, the writing of *Shaping Educational Policy* is a tribute to the organized profession's capacity to accept, adopt and put to use *The American High School Today* and *Slums and Suburbs* without disturbing its internal power structure's *status quo*.[3] Whether the profession's state based, rural and suburban, power system can buttress itself with the state compact developments and once again accept, adopt and use Conant and Company, remains to be seen. In any case, the conflict between the "educationist establishment" and its erstwhile friends is not only out in the public press but also institutionalized within the U.S.O.E. and between that office and an increasing number of states.

Finally, as James pointed out,[4] some attention needs to be given to the *Baker vs. Carr* decision.[5] The one man one vote principle will produce and is already producing political realignment of state political systems. It will reduce the rural, small town advantage held in one or more houses of our state legislatures. Such a reduction of rural political power in our state legislatures will have a significant effect upon the relationship between state agencies and local districts on the question of autonomy. In some states, it will sharply reduce the political power of the organized profession, in particular those states having powerful state-wide associations which are well knit to rural grassroots legislative districts. The probable effect of reapportionment in some states and in particular its effect upon the politics of education in these, may be inferred by the earlier effects of the reapportionment of the lower house in California's legislature. James' conclusion that such political realignments, as will be produced by reapportionment, are likely to have considerable impact upon the governing of education can be accepted without necessarily agreeing with his further judgment that the meaning of such realignments for educational policy development at the state level is completely unknown at this time. What is needed in order to move toward such understanding and hence prediction are theories of the politics of education which will take into account the present state of affairs and produce hypotheses especially concerning the probable directions of change in these.

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[3] James Bryant Conant, *Shaping Educational Policy*, (New York: McGraw-Hill, 1964); *The American High School Today*, (New York: McGraw-Hill 1959).

[4] H Thomas James, "Government and Politics," *Review of Educational Research*, XXXIV (October 1964).

[5] Baker vs. Carr, 369 U. S., 186 82 Sup. Ct. (1962).

A few years ago, say five or six, it might have been legitimately said that in order to usefully assess and then propose directions for the shaping of educational policy at the state level, descriptive studies of a number of states were needed. That statement would be considerably less legitimate today. Descriptive studies of the state politics of education are still needed, since few of the fifty states have been so studied and described, and many that have been completed lack depth. Nevertheless, there now exists descriptive literature which provides the basis for the next step. These descriptive studies have set the stage by providing an empirical base for the development of theory in state government and educational policy-making. This is the most crucial step in the development of understanding though it cannot be taken without the observational first step.

With the development of theory, one or more explanatory systems which will account for the events as described, the field will be ready to undertake sharply descriptive studies, as well as verifiable research involving testable hypotheses and to offer, however tentatively, guidelines for state political action in the realm of educational policy-making. Thus what is needed and now can begin is the systematic relating of the descriptive data at hand into one or more systems of explanation which will account for the events described. This should also provide a conceptual framework for additional but more focused descriptive studies. Such systems should also produce testable hypotheses and function as a guide to political action.

This paper is a limited attempt to meet the theory need in the state politics of education. It will first selectively consider some of the descriptive studies at hand. From this consideration, a crude taxonomy will be offered within which states may be placed with particular regard to the relationships between the legislature's educational policy-making and the organized profession of school men and their allies. Next, some of the elements of political change which appear to result in shifting a given state from one classification to another will be noted. Then, a summary statement of theory in the state politics of education with particular regard to the relationships between the organized profession of schoolmen and the legislative process. Penultimately, reference will be made to recent studies in California using elements of the theory and preceding analyses. Finally, the changing role of state departments will be given attention as the previous discussion offers implications for these.

Central to this plan is the consideration that state departments of education are constitutionally, fiscally and traditionally intertwined with the state political process resulting in educational law. This suggests that discussion of their roles apart from the state's educational political context is likely to be sterile. It is this context which will be given first and indeed greatest attention in this paper.

Studies involving eleven states have been recently published by teams from Syracuse University University and Washington University.[6] The former involves eight states in the northeast, the New England states, New York and New Jersey. The Washington University team studied Michigan, Missouri and Illinois. Michael Usdan's independent study of New York State added depth to our knowledge of educational politics especially at the grass roots of that state.[7] As James has pointed out, these studies represent a significant addition to our knowledge of the state politics, in particular legislative, of education.[8] However, to paraphrase Goldhammer, until concepts with explanatory statements of relationships among these which account for the pattern of events described in these studies are developed, our understanding as distinguished from knowledge will not be significantly enhanced.[9] This is in no way intended to derogate the work accomplished in these studies. They do provide us with a published set of observations and hence constitute a manageable body of information. However, having begun their descriptive task atheoretically, these researchers have brought the field to the point where concepts and theory using these may now be imposed upon the data so as to produce greater understanding.

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[6] Stephen K. Bailey, et al. Schoolmen and Politics. (Syracuse: Syracuse University Press, 1962); Nicholas A. Masters, Robert H. Salisbury, and Thomas H. Eliot, State Politics and the Public Schools. (New York: Alfred A. Knopf, 1964).

The venture entails the selective consideration of the descriptions at hand in terms of gross commonalities and differences which characterize the reports in particular with respect to the general political pattern of professional influence upon the legislative process of each state and the special role of state departments in this regard. The lack of fine detail in the published reports is at this stage of our knowledge a virtue since it increases the probability of seeing the forest without becoming enticed by trees. Theory building can lead on the one hand to testable hypotheses and verifiable studies and on the other to preliminary and tentative guides to action. The latter must be treated with caution since they will inevitably be the product of post factum analyses.

A crude taxonomy may be used to classify the characteristic organizational linkages between the legislature and the organized educational profession of given states. The published reports used for this paid more attention to the organized profession as it acts to influence the legislature than they did to the structure of the legislature and the legislative process in each state. Consequently, the classification of states will depend upon characteristics of the professional organization at its linkage points with the legislature and its typical patterns of behavior in particular as it goes about the business of influencing the legislative process.[10] Confining ourselves first to the different types of organizational structures characteristic of given states reported as being used by education interests to influence the cause of educational legislation suggests a four-way typology. One type may be illustrated by reference to Bailey's report of Vermont and New Hampshire. Localism may here be seen not only as dominating the politics of these states but also the relationship among schoolmen and their allies as they seek to influence state educational policy. The condition of the organized profession depicted is essentially dispersed, paying strong tribute to the influence of locality and particular local school districts.

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[7] Michael D. Usdan, The Political Power of Education in New York State. (New York: Institute of Administrative Research, Teachers College, Columbia University, 1963).

[8] James, op cit.

[9] Keith Goldhammer, "Essay Review," Educational Administration Quarterly, Vol. I, No. 2, (Spring 1965), pp. 68-69.

From a statewide point of view in terms of efforts to influence legislation, the educational interests of such states appear unorganized. This view is misleading since it ignores the strength of localism with its jealously guarded local autonomy. It may also conceal the possible differential advantages accruing to a few "key" school districts by remaining apart from other schools. So the term locally based disparate will be used to denote the type of educational organizations in states where localism and separatism exist as the dominate characteristics of educational politics used to influence legislation.

A second type of organization used by schoolmen may be seen in the descriptions of states such as Missouri, New Jersey and New York. In each of these there exists well-knit associations of schoolmen and their allies. The different statewide associations of teachers, administrators, school boards and federated groups of lay citizens for example, join together to influence the legislature. This produces an essentially monolithic structure exhibiting a relatively solid uniformity and harmonious pattern of organizations. Such pyramids of statewide organizations have an identifiable apex which is informally, or better, extra-legally linked to the legislative process. Keith's office, the M.S.T.A. executive secretaryship, in Missouri; the "Princeton Group" in New Jersey and the New York State Educational Conference Board illustrate the point in each of their states. The term state-wide monolithic will be used for states where the type of educational organization characteristically influencing legislation presents the picture of a unified pyramid of organizations converging in a citadel agency informally linked to the legislature.

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[10] The legislative process is here intended to refer to the process inside the legislature itself.

A third type of organized educational interest group may be seen in Michigan. Here, as in the states cited above, there also exists similar strong educational associations which work to influence legislation. However, the united pryamid is missing. Instead, what appears to be a monolithic structure in type two states may be seen as fragmented with each of the associations displaying a relatively strong statewide pattern of membership but independent of one another. No single citadel agency exists and multiple linkages connecting different educational associations with the legislature may be observed. This organizational pattern can be described as statewide fragmented.

A fourth type of educational structure influencing legislation may be seen in Illinois. The major educational associations influencing legislation are here seen as pulled together not informally and extra-legally but legally by legislative action in the Illinois School Problems Commission, which also includes as members individual legislators representing both houses as well as representatives from the governor's office. The term statewide syndical is used to denote this structure with a citadel agency to which agents of separate associations and governmental bodies belong as a result of governmental action to create a linkage system between the legislature and the education interest groups.

The syndical form is distinguishable from the monolithic by three characteristics. The former is created by governmental action while the latter is produced extra-legally by the organizations of schoolmen and their allies. The syndical includes legislators as agents of the legislature. Finally, the organizations putatively represented in the monolithic pattern's citadel agency are demonstrably coopted by schoolmen while at least some of those in the syndical pattern represent completely independent organizations.

Interdependent with and therefore influencing each of the four types of social structure, as well as being influenced by them, are four typical and related patterns of customary behavior exhibited by those who occupy positions at and near the linkage points. So the customary behavior pattern in the locally based disparate type is entrepeneurial. The social structure involved places a premium upon such behavior and is in turn supported and perpetuated by individualistic district superintendents and school boards in the main. One is tempted to think of this leadership group as an educational squirarchy having considerably less capacity to produce legislation than to prevent it, considerably higher status in the provinces than elsewhere.

Cooptive behavior instead is characteristic in particular of those who sit at the apex of the state-wide monolithic structure and in general down to the grass roots of its component social sub-systems. Again, cooptation is not only characteristic of state-wide education monoliths but also tends to prepetuate this organizational form. In turn, this type of structure tends to value cooptive behavior, persuasion, the inviting of universal agreement on values, and the solidarity of consensus. The typical behavior characteristic of such leaders also tends to resemble Vedich and Bensman's reports on Springdale's leadership with its emphasis on personal trust, its etiquette of gossip, and its habit of turning public meetings into sessions for ratifying decisions previously arrived at in informal settings rather than ones involving public confrontation of issues and divergent points of view.[11]

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[11] Arthur Vedich and Joseph Bensman, Small Town in Mass Society. (Princeton: Princeton University Press, 1958).

What Masters, et al. call "a low pressure-system" in Missouri is the product of this behavior and proceeds by avoiding conflict.[12] One is reminded of the sacred community and the leadership of this type structure may be thought of as an educational clergy. The charge of establishment leveled against all educationists by Conant and others is most germaine to the state-wide monolithic form of organized education interests and its leadership. To avoid what might be an invidious term, it may be more useful to think of this leadership group as an educational oligarchy.

In contrast, the state-wide fragmented type of organization tends to be associated with a more secular mode of behavior and leadership in the politics of education. The structure fosters and is in turn supported by competitive behavior. Competition for the ear of the legislature may be observed among the various professional and education oriented state associations with their respective and conflicting spokesmen at linkage points with the legislature. At another level competition for members of the educational professions is seen. Conflict resolution rather than consensus, bargaining instead of persuasion, and contractual agreement rather then accommodation tend to characterize the life style of the politics of education in this type of structure. The leaders of these competing associations and interests may be thought of as the state's educational polyarchy.

The state-wide syndical form of organization is above all a governmentally produced coalition of interests and its major behavioral characteristics are coalitional. Masters, et al. refer to the Illinois School Problems Commission as producing structural consensus.[13] Without entering into the issue of what "true consensus" is, it is possible to describe the dominant behavioral characteristics of this fourth structural form as involving the containment of conflict which might otherwise divide its members and the interests these represent so as to present the legislature with agreement upon proposals, to prevent other interests from competing with them for the legislative ear and to reduce the political coinage in public school affairs. These goals are attained in three major ways characteristic of coalitions; the inclusion in its membership of the major educational and legislative interest groups; the exclusion from consideration of "issues that it regards as basically irreconcilable" and the selection of members willing to compromise as representatives of their respective interest groups. The linkage point between the legislature and the major educational interest groups may be thought of as led by a synarchy.

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[12] Masters, pp. 12-98.

[13] Masters, pp. 99-178.

This taxonomy might be illustrated in terms of its structure with its correlations of behavior patterns and leadership group as below.

FIGURE 1
Taxonomy of State Politics of Education

Structural Type	Life Style	Leadership Group
locally based disparate	entrepreneurial	squirarchy
state-wide monolithic	cooptational	oligarchy
state-wide fragmented	competitive	polyarchy
state-wide syndical	coalitional	synarchy

Since the proposed classification system is empirically grounded in the descriptions of only a few states, it is distinctly possible that the system is not exhaustive. On the other hand, it may be. The states in our union do not operate as water-tight compartments. Moreover, the education fraternity does exhibit an appreciable amount of inter-state communication. The issue is empirically resolvable and research to that end is warranted.

The reports do, however, shed some light on another question, do states change from one type to another over time? It appears that they do but perhaps in one direction only. Again, the limitations of the data at hand may account for this apparent directionality. In any case, it would seem that the locally based disparate is an early form giving way to the state-wide monolithic. So, for example, Bailey and his collegues consider the New Hampshire

Joint Committee on the Needs of Education composed of representatives of the major educational associations and chaired by the Executive Secretary of the Association of School Boards as potentially another Conference Board [14] or Princeton Group[15] in New Hampshire.[16] Their conclusion with regard to this state and their identification of its resemblance to Massachusetts indicates their awareness of a developmental pattern and directionality to that pattern. Thus they say, "... it still ranks with Massachusetts as representative of the states where permanency is not assured." [17] Their discussion of the Massachusetts power struggles indicates how a locally based disparate type state almost became a state-wide monolithic type.[18] The development of other interests by Cyril Sargent before the successful institutionalization of the Massachusetts Council for the Public Schools may have prevented that state from joining the ranks of the state-wide monolithic states. [19] But, in any case, the basic story is clear enough to indicate the direction of change is from locally based disparate to state-wide monolithic. Vermont instead is described by the Bailey team as having "a longer ... row to hoe." Its present disparate locally based structure is illustrated in their report of the struggle over the 1961 finance legislation.[20] Thus, while limited, the evidence at hand indicates that if locally based disparate states undergo a major revision of their customary entrepreneurial policy making pattern, the traditional form of their politics of education, then they will become state-wide monolithic in structure with the cooptational life style of politics. Not surprisingly an examination of the descriptions of state-wide monolithic cases suggests they were once locally based disparate.[21]

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[14] The apex of the New York State monolithic structure.

[15] The New Jersey apex.

[16] Bailey, p. 39.

[17] Bailey, p. 39. (underscore mine)

[18] Bailey, pp. 63-73.

[19] Bailey, p. 73.

[20] Bailey, pp. 92-102 and esp. pp. 99-100.

[21] Bailey, pp. 36-38.

Similarily, it would seem the strong state-wide but fragmented structural pattern comes after the monolithic one. It may be hypothesized that the existence of a state-wide fragmented pattern is a necessary though not sufficient cause to produce the state-wide fragmented pattern. This seems to have been the case in Michigan where "there is no established process ... to eliminate or modify the factors that cause conflict over education issues."[22] The first element which Masters et al. report as characteristic of Michigan implies the transition from the state-wide monolithic type. So they write, "First, the education groups that make demands on the legislature are no longer unified."[23] In summarizing their findings the Masters' team contrasting Michigan, a state-wide fragmented structure of educational groups, with the state-wide monolithic structure of Missouri and the syndical structure of Illinois say,

> "perhaps the key to understanding the role of education interests in this state is a recognition of the following two points. (1) To a much greater degree than in our other two states, the various groups act independently ...(2) The emergence of conflicting elements beyond merely the teacher's union within the education lobby, coupled with broader political conflicts in the state's political system, some of which are between the two major parties, creates a problem for the majority of the education interest groups." 24

That Michigan formerly had a state-wide monolithic type of educational interest structure may be seen in their report despite the fact that the Masters' team was not concerned with a development theory. "Our data," they say, "suggest that until fairly recently, 1959 to be exact, a power structure consisting mainly of the N.E.A. ... did indeed exist, a structure capable of keeping education issues from becoming controversial. 25 Hence, it would seem the state-wide monolithic pattern tends to devolve into a state-wide fragmented structure. Cooptation, the politics of the priesthood, is replaced by competition, the politics of the market-place. The latter is visible and thrives on the resolution of conflict, the former hidden and shrouded in mysteries subsists on the development of consensus. But, it would also seem, that this "revolution" in a given state's politics of education is coupled with major change in the macrocosm of the state's political system and not one uniquely involving education.

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[22] Masters, p. 180.

[23] Masters, p. 180 (underscore mine).

[24] Masters, pp. 205-206.

[25] Masters, p. 205.

The syndical structure of Illinois is reported precisely as the result of fatigue and deadlock over educational issues in the state. The deadlock seems to have been the result of the competitive life style of the fragmented mode and the necessary condition for producing the syndical form. Masters et al point out that one result of what they call "The 'Go-It-Alone' policy," which preceded to the creation of the S.P.C. was "a perpetual stream of interests pressing the General Assembly for action."[26] Their report indicates that as a result of Governor Stevenson's initiative, the legislature created the Illinois S.P.C. because it was, "anxious to find solutions for the many problems in education it faced and to avoid the constant harassment that would result from failure to meet its obligations to the public schools..."[27] A similar sense of frustration by members of the organized profession is also noted. An interviewee representing the I.E.A. is quoted as saying, "developing a program of school policy which was acceptable to everyone was almost impossible. Every group had its own plan...[28] In other words, Illinois before the S.P.C. was organizationally fragmented by statewide associations, which competed with one another in the market-place of public power and displayed no single leadership clique. So also one might describe Michigan after 1959.

Viewed in terms of states changing from one type of educational politics to another, it seems that the taxonomy offered above can be considered as a developmental construct. The four types of structure would then be seen as phases in the development of political structures for influencing the state legislative politics of education. However, even if the hypothesized system relationships should survive phenomenological testing, we would still be a long way from useful prediction. Even if we could assume survival from such testing, it is necessary to determine what forces other than the preceding structural mode are necessary to produce the shift from phase one to phase two, from two to three and from three to four. The Bailey and Masters reports provide some clues here. It should be remembered that their major concern was to describe the politics of education at the time of their study. Their task was not concerned except incidentally with the genesis or history of the patterns they found. Nevertheless, their works provide useful hints as they occasionally comment, contrasting what they found with what seemed to have gone before.

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[26] Masters, p. 106.

[27] Masters, p. 112.

[28] Masters, p. 106.

In addition to the preceding pattern, one factor seems to emerge by its presence where states have been reported as moving from one phase to another. It is equally prominent by its absence in those instances where a phase change is noted as almost but not quite having taken place as in Massachusetts. It is political realignment, not of education in particular, but of the state's elected power structure itself. So the mid-western team suggested in their conclusions on Missouri in its present statewide monolithic phase.

> "The M.S.T.A., largely by adopting a strategy of accommodation, has 'routinized' the decision-making process. In this way it has been able to gain hold of a predominant or elite positions within the state's political structure. Although the M.S.T.A. through its relations with the official agencies of government provides for Missouri a stable and seemingly durable power structure, forces are emerging that suggest this arrangement or pattern is not permanent...elements of discontent with the low conflict style of politics are increasingly evident...growing demands for state services from many sources threaten to open the state's politics to much more conflict than in the past."[28]

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[28] Masters, p. 97-98.

They further conclude that the traditional reliance of educationists upon political styles and strategies based upon values or attitudes on how education issues should be decided will become a liability particularilγ, "when the parties divide on issues that directly affect the schools."[29] It was the action of the governor and General Assembly in Illinois which produced the S.P.C. In Michigan the party division over education and the realignment of political power structures involving the two legislative houses and the executive seem to have made the M.E.A.'s old political formula bankrupt. This suggests, a necessary but probably not sufficient cause for a state's phase change in the politics of education, is a reconstitution of the state's political system itself.

So in attempting to judge the probable future of the educational politics in a given state it would be necessary to determine which of the four phases of structure, life-style and leadership that state fits. In addition, some determination of whether the particular state is moving from one phase to another is needed. Given the political revolution underway in education, especially as it coincides with reapportionment, the chances are that more states will in the next four or five years be undergoing transition from their present phase than would otherwise be the case. From this point of view the term, revolution, is a gross overstatement. We would not expect the effects of new federal funding, reapportionment or other forces identified earlier to be different in kind, only in magnitude from those already noted as producing a state's change of phase in its politics of education.

The case of California offers additional evidence concerning the utility of the developmental construct sketched out above as well as the conclusion that new structures, life-styles and leadership groups in given states are likely to follow this pattern. Several studies were recently completed in California using the typology above to: (1) describe the state's educational politics historically, (2) ascertain whether what appeared to be a phase two to phase three shift, from a state-wide monolithic to a state-wide fragmented type, around 1960 did indeed demonstrate the changes in interest group structure, political life-style and leadership predicted by the theory, and if so, (3) to judge whether the changes in pedogogical politics were independent of the state's political macrocosm.

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[29] Masters, p. 259.

Dean Wiley in a study of the relationships between the California Legislature and the education profession from 1849 to 1963 as seen in published sources found that in the period from 1849 until around 1919 the profession was characterized by a locally based disparate structure.[30] From 1919, with the C.T.A. as its central agency, the profession controlled by an oligarchy of school superintendents perfected its monolithic structure operating with a predominantly cooptational and conflict avoiding life-style. Thus, for instance, from 1929 to 1962 all the successfully elected California superintendents of public instruction ran as incumbents! The high water mark of this monolithic structure and its "politics of consensus,"[31] 1945 to 1952, was contrasted by Bowles to the more recent "politics of conflict,"[32] 1961 to 1966.[33] His data, unlike Wiley's consists largely of interviews with participants in the events of each period as well as a year's participant observation as a staff member to the minority in the California Legislature, 1965 - 1966. His work documents the shift from phase two to phase three in greater depth and detail than did the Wiley study. The failure of the one time monolithic structure of professional influence to prevent hostile legislation and to control the elected state superintendency from 1962 on is directly related to its present fragmented, competitive and polyarchic condition. These studies document the development of California's educational politics through three periods which display the sequence indicated by the developmental construct derived from the study of the reports on the eleven other states. In California's case at least, the structural sequence from locally based disparate to state-wide monolithic, thence to fragmented holds. So, also, do the related sequences of political life-style and types of leadership groups.

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[30] Dean Wiley, Political Interaction of Education and the California Legislature, 1849-1963. (Unpublished Ph.D. dissertation, Claremont Graduate School, 1966).

[31] Wiley's terms.

[32] Bowles' terms.

[33] B. Dean Bowles, Educational Pressure Groups and the Legislative Process in California, 1945-1966. (Unpublished Ph.D. dissertation, Claremont Graduate School, 1966).

The relationship of California's changes in the political macrocosm of the state is also supported by the Bowles and Wiley studies. However, clearer evidence on this issue exists in Fahey's work on the California legislature and the changes in its decision-making patterns between 1957 and 1965.[34] Fahey had spent two and a half years as a staff member "deeply involved in the decision-making process of the California Legislature," before undertaking his study. His work indicates that the phase two to phase three shift, documented by the Bowles study of the education interest groups - the fragmentation of the educationist monolith, took place hand in hand with major political change of the legislature. These involved in part, an increasingly partisan voting pattern with respect to education as well as other matters and centralization of decision-making inside the legislature and in the leadership of the lower house. In fact, Fahey sees the political reorganization of the legislature as producing the fragmentation documented by Bowles. "By 1961 the political revolution of 1958, which had resulted in the Democrats gaining massive control of the executive and legislative branches, had ensnared the educational structure in its turbulent wake...The educational groups could not or would not adjust to the totally different political environment.[35] He continues "...confronted with a new political environment, the powerful educational structure fragmented. And although the segments were individually well organized, they were forced to deal with the legislature as muliple units rather than as an organized whole." Fahey's work is based upon his experience in the legislature and interviews. Both his and the Bowles study, thus, rest heavily upon the reports and hence perceptions of interviewees and their own observations. More reliable from a technical point of view, though not as significant in producing theory are the findings of a study of the voting behavior of California legislators during the transition from phase two to phase three. McIsaac tested the hypothesis that a basic shift in the composition of clusters of legislators as determined by their voting behavior would be found if the hypothesized transition to fragmentation (since documented in studies of the educational interest group structure) were related to political changes in the legislature itself.[36] He used factor analyses to identify the voting groups in the first, middle and last third of each of three legislatures. Comparisons of these revealed a shift in the factors away from groups of legislators displaying geographic and social similarity in their home districts toward strict party partisan clusters.

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[34] Lawrence J. Fahey, The California Legislature and Educational Decision-Making. (Unpublished Ph.D. dissertation, Claremont Graduate School, 1966).

[35] Fahey, p. 218.

Masters et al speaking not of California but of Michigan say "... when the parties divide on issues that directly affect schools, the education interests tend to lose their initiative; they are, so to speak, boxed in by the very tactics that in the past may have been effective.[37] Given the vantage of more studies than the three which the Masters team had and especially with a state's educational politics studied longitudinally as in California, we would amend the statement only by restricting it to phase two states. The explanation of the Masters et al dictum lies in their further statement, "Emphasis on consensus and avoidance of open conflict are advantageous only when the strains and divisions within the political system do not erupt." The tactics described here are not inherent to education groups, witness Michigan and California recently.

The set of studies done in California taken with those completed earlier lends weight to the possible utility of the taxonomy offered above.[38] The longitudinal nature of the California studies adds some weight to the possibility of our using a theory in the state politics of education which is developmental in nature. Hence the following diagram may be offered.

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[36] Donald N. McIsaac, A Statistical Analysis of the State Legislation in California. (Ph.D. dissertation, Claremont Graduate School, Claremont, California 1966).

[37] Masters, p. 259.

FIGURE 2
A DEVELOPMENTAL CONSTRUCT OF
THE STATE POLITICS OF EDUCATION

Characteristic	Phase One	Phase Two	Phase Three	Phase Four
1. Structure	Locally based disparate	State-wide monolithic	State-wide Fragmented	State-wide syndical
2. Political behavior	entrepreneurial	cooptational	competitive	coalitional
3. Leadership Groups	squirarchy	Oligarchy	polyarchy	synarchy

Development over time

State-wide general political reorganization

This is still a long way from a sufficiently explanatory system to provide safe guides for action. On the other hand, held flexibly, it offers more purchase on the future of state pedogogocal politics then operating without theory does. Given the assumption that this construct would survive the tests of research, what guides does it offer? [39]

To those who would influence future events in their state's politics of education and, who hence, need a theory of state educational politics and especially of change in this more than do the rest of us, the developmental construct offers several warnings more than guides. These may be of equal value to those in state departments of education since their work is vitally affected by their state's educational politics. It suggests, first of all that the educational politics of a given state are neither unique to that state except in details nor identical to the educational politics of *all* other states. Instead, the first task is to determine which phase the particular state is in, locally based disparate, state-wide monolithic, fragmented or syndical. Most states will be in phase two, some in phase one and a few in phase three. (This assertion rests upon the assumption of an interaction between national influences within the professional associational network and state's educational political structures.) Following this determination of type, one should, unless Russian Roulette is one's favorite pastime, make an assessment of the odds on a reorganization of the state's political system. This is clearly one place where the profession's leaders missed in Michigan and California.

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[38] p. 18

[39] Considering how little research we do have bearing on this, before reading further let this writer say, Caveat emptor!

If the larger political system is undergoing realignment, it is *probable though not inevitable* that so also will the politics of education move it from one phase to the next. We would add that the profession's leadership group of a state will almost certainly underestimate such political changes. To see these in perspective would require them to give up their positions to others more in tune with the new political realities. This almost certainly means a shift from older more established leaders to young turks. To expect men and women who worked their way up to the top of extra-legal political influence structures to see they need to yield those positions "for the good of children" is ridiculous and unfair. The young turks must take that power inside these associations or accept the present state of young men in the M.E.A. and C.T.A. In any case, if a state is undergoing political reorganization and the politics of education change with it an the leadership group, the political behavior and the structure of the profession's interest groups will all change together. Where, instead, the particular state is classified in a given phase and change to the next phase is not likely at that time, the appropriate life-style of political behavior and the types of leadership groups are evident. The path of least resistance with maximum yield is clear. What one may not do without getting hurt under such conditions is also clear.

Most assuredly, we are also witnessing major changes in the governing of education produced by the newer, more direct and stronger involvement of the federal government in educational policy making. This thrust may seem to falter for a time because of heavy American engagement in Southeast Asia and political shifts in the Congress, but, despite possible budgetary cut backs, the federal initiative in education emanating from the White House under Kennedy and Johnson will not be lost. Moreover, the focus on particular federal programs has obscured to a degree, the fact that federal agency overlays such as title III units and their coordinating centers partically by-passing state and local structures for governing education are even now producing a new federal, state and local mix in the control of education. In effect, a constitutional revision of the govenning of education, and hence in the politics of education, is underway.[40] Unless the "one man - one vote" rule is upset through constitutioaal amendment, the movement into stage III conflicts at the state level with increase rapidly.

Much of the federal thrust is directed toward the area of technical and vocational education. One of the first state department sub-units to experience the effects of the changing state politics of education will be the technical and vocational one. This means that on the one hand, the state department people concerned with technical and vocational education will face, indeed are already facing, demands for change and will find the political ground rules in their area are changing. Their traditional isolation will cease. On the other hand, these very changes provide an opportunity for leadership to technical and vocational sub-units in state departments; not, however, leadership to go it alone but, instead toward the reorganization of state departments as unified public agencies with a new political role. Unless state departments reorganize so as to give primacy to the common interests shared by their various sub-units, each of these will in its turn find it has lost its opportunity for leadership to other agencies of government e. g. the legislature, the governor, the Congress and most of all, the White House. The decision needed here are not those of the researcher. Action on this problem rests with the practicing school administrators in particular state department offices.

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[40] This point is elaborated in Laurence Iannaccone and Frank W. Lutz, "The Politics of Education." AAUW Journal, (May 1967) (in press).

CHAPTER VII

THE EXPANDING ROLE OF FEDERAL GOVERNMENT IN EDUCATION WITH IMPLICATIONS FOR STATE EDUCATION DEPARTMENTS

Nicholas A. Masters*

Masters analyzes three implications the new federal programs hold for state education departments. First, he believes the new federal programs clearly imply that state agencies should pay closer attention to the specific, immediate needs and programs of the large urban areas in order to survive as effective organs of policy and administration. Second, the new federal educational programs will force certain vital administrative and policy decisions upon state governors. Finally, Masters reveals that if state education departments continue their traditional association with state affiliates of the National Education Association, they will run the risk of being frozen out of the new federal programs. This is due to the markedly different policy approaches between the N.E.A. and the Office of Education.

Current Federal Role
In Support of State Educational Agencies

Recent growth in the variety and scope of federal programs affecting state educational agencies is still largely unrecognized even by generally informed observers. In 1961 there were 10 major federal programs administered through state educational agencies. These included vocational education, school lunch, surplus property, civil defense, special milk, cooperative research, education of the handicapped, and various programs under the National Defense Education Act. In 1961 a total of $758,781,691.00 of federal funds was administered by state educational agencies. Between Fiscal Year 1961 and Fiscal Year 1966 the total financing for state administered programs nearly quadrupled. The 1966 figure was $2,995,976,521.00, an increase of approximately two and one-half billion dollars.

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Even these figures underestimate the burgeoning commitment to education. In 1961 the three largest federal programs were surplus property, school lunch and special milk. These are obviously only indirectly related to educational goals. If the figures for those three are omitted from the totals for each of the years between 1961 and 1966, the level of federal financing in Fiscal Year 1966 is more than twenty times that of the earlier years. The figures are as follows:

Fiscal Year 1961 (omitting the three programs mentioned above).	$ 106,659,926
Fiscal Year 1966	2,166,976,521

The new programs enacted between 1962 and 1965 far overshadow earlier federal education commitments. For example, the three state administered programs under a single act--the Elementary and Secondary Educational Act of 1965--were financed at a higher level in 1966 than that for all state administered programs in 1961.

Moreover, the years since 1961 have seen a general broadening of the impact in state administered federally assisted programs. Those in effect in 1966 embodied a wider range of purposes and affect more different segments and areas within the educational establishment than did the body of educational programs in 1961.

In 1961, the three single largest programs, as previously noted, involved lunch, milk, and surplus property. These may be characterized as "special" projects, supplementary to or supportive of the basic educational function. Other

1961 programs--Civil Defense, Public Libraries, Cooperative Research and State Statistical Services under N.D.E.A.--bore more directly on actual classroom education of students, as did the two vocational programs, the grants for training professionals in the education of handicapped children and the equipment and guidance counseling testing programs under N.D.E.A. But in terms of total financing, all these were subordinate to the supplementary educational programs.

Since 1961, additional supplementary, special, or supportive programs have been enacted. These include TV facilities, adult basic education sponsored under the Economic Opportunity Act, the community service continuing education program under Title I of the Higher Education Act of 1965, and the grants to state educational agencies under Title V of the Elementary and Secondary Education Act of 1965.

More numerous and probably more far-reaching than these, however, have been the newly enacted programs that directly affect such basic components of the overall educational programs as books and materials, student support, teaching equipment, and the provision for training personnel. Among them are the higher education facilities construction programs; activities under sections 211 and 214 of the Appalachian Regional Development Act; the 1963 vocational education enactment; the arts and humanities teaching equipment program; the equipment grants program under title VI of the Higher Education Act of 1965; the student loan programs under that Act and under the National Vocational Student Loan Insurance Act; and titles I and II of the Elementary and Secondary Education Act of 1965. Of these, the higher education facilities construction program, the arts and humanities and higher education equipment grants, and the two programs under the E.S.E.A., may be said to have opened virtually new territories for state-administered federal educational assistance programs.

In addition to enacting these programs with new foci, the post-1961 Congresses also amended several older ones. In every instance, these amendments had a liberalizing or broadening effect.

Amendments to the Cooperative Research Act in 1965, for instance, affected both the activities eligible for support and the parties eligible to carry out those activities. As enacted in 1954, the Act authorized the Commissioner of Education to make grants to or contracts with colleges, universities, or state educational agencies for support of educational research programs. The 1965 amendments made funds available for the construction and operation of educational research facilities and for support of programs of training for educational researchers. Public agencies other than state universities and educational departments, certain private agencies, and individuals were also added to the list of those eligible to participate in the programs.

The Library Services Act of 1956 had authorized grants to state library administrative agencies for use in providing or extending public library services in rural areas. Amendments adopted in 1964 broadened this program so that urban areas were eligible for assistance, and added a new title authorizing grants for the construction of public library facilities.

In 1961 state agencies could receive grants for use in student support activities designed to increase the supply of skilled educators of the mentally retarded. Subsequent amendments have broadened this program so that grants may be used to support the training of professionals in the education of children with a wide range of handicaps--the hard of hearing, visually handicapped, emotionally disturbed, crippled, speech-impaired, deaf, and those whose health is otherwise impaired, as well as the mentally retarded.

Finally, the Vocational Education Act of 1963, in addition to authorizing vocational education programs for groups of individuals who had not formerly been served by federal programs (e.g., those in office occupations), also amended the Acts of 1917 and 1946 to broaden the rather narrow occupational categories which could be assisted under those Acts. For example, under the two earlier Acts, federal assistance for agricultural education was extended only to those programs designed to meet the needs of--

> ...persons over fourteen years of age who have entered upon or

> who are preparing to enter upon the work of the farm or of the farm home. ...and that such schools shall provide for directed or supervised practice in agriculture, either on a farm provided for by the school or other farm, for at least six months per year.

The 1963 Act relaxed these limitations on agricultural education so that the term is presently defined as--

> ...vocational education in any occupation involving knowledge and skills in agriculture subjects, whether or not such occupation involves work of the farm or of the farm home, and such education may be provided without directed or supervised practice on a farm.

The definitions of "home economics", "distributive occupations", and "trade and industrial occupations" were similarly broadened by the 1963 amendments.

Two other developments in the area of state-administered federal educational assistance programs over the years 1962-1966 merit some mention.

The first of these is the more frequent appearance in the newer programs of statutory authorizations of grants to state agencies specifically for the purpose of meeting costs incurred by those agencies in developing and administering state plans under the programs. Prior to the 1960's, a few programs--notably those under the N.D.E.A.--carried similar authorizations. But the use of statutory authorization for administrative grants has increased markedly in recent years. The following major programs make use of them: the Higher Education Facilities Act of 1963; the Vocational Education Act of 1963; titles I and VI of the Higher Education Act of 1965; and titles I and II of the Elementary and Secondary Education Act of 1965.

Under title I of the higher education facilities construction program, the Commissioner of Education is authorized to make administrative grants to the state commissioners from an appropiration of up to $3,000,000 per year in each of the first two fiscal years of program operation. The Commissioner determines the amount of funds to be granted to each state commission.

Under sec. 4 of the Vocational Education Act of 1963, a state may use an unspecified amount of its allotment for "state administration and leadership." Under the work-study program as authorized by sec. 13 of that Act, however, a state may use for administrative expenses (a) up to one percent of its allotment for such program, or (b) $10,000, whichever is the greater.

Under title I of the Higher Education Act of 1965, a state may use for administrative purposes in any year up to five percent of the basic grant it receives under the program, or $25,000, whichever is the greater. Under title VI, appropriations of up to $1,000,000 for each of the fiscal years 1966, 1967, and 1968 are authorized. From these, the Commissioner may grant each state commission such sums as he considers necessary for the administration of the program.

Title I of the Elementary and Secondary Education Act of 1965, as enacted, authorized grants to each state for administrative purposes of up to one percent of the total amount of basic grants paid in that state in any year. It was pointed out shortly thereafter, however, that this would be a rather small sum for some states. Consequently, less than seven months after its enactment, this provision was amended by P.L. 89-313 (Nov. 1, 1965) to allow administrative grants of one percent of the amount of basic grants or $75,000, whichever is the greater.

The second title of the 1965 elementary-secondary act authorized each state to use up to 5 percent of the amount of its grant under that title in Fiscal Year 1966 for administration of the program. Thereafter, the amount is limited to 3 percent in any fiscal year. The Elementary and Secondary Education Amendments of 1966 (H.R. 13160, S. 3046, as introduced) would amend this provision so that a state could use for administration (a) 3 percent of its grant under the title, or (b) $30,000, whichever is the greater.

A second noteworthy development in this area in recent years has been the advent of the "state commission" as the agency charged with administration of certain federal programs. State commissions are required under title I of the Higher Education Facilities Act of 1963 and under title VI of the Higher Education Act of 1965. Under these programs, the state commission is charged with drawing up a state plan, with determining relative priorities among grant applicants, and (within statutory limits) with setting the federal share of the cost of each project. A state commission can be either the traditional state agency or department or one specifically designated by the state for purposes of receiving and administering federal funds. Moreover, in a number of states the vocational education aspect is handled entirely by a special vocational board or agency designed for that purpose. Wisconsin is an example of this.

Merely outlining these programs indicates their phenomenal growth. It also implies the enormous consequences to state educational administrations that must follow the outpouring of such vast new sums and the introduction of such broad new functions.

Policy Implications

What impact will these new federal programs have on our state educational departments? What are their implications for change? What options are open to state educational departments in dealing with this greatly expanded federal activity? Before attempting to suggest specific answers to these questions, we must examine state educational departments in terms of how they have operated in the past and how they have changed in recent years.

In terms of organization and structure, there has been great diversity among state educational agencies. In some states--twenty-two to be exact --the chief state school officer is an elected official and must operate and negotiate with the political forces of the state. In some instances this may involve a selective use of patronage to further his educational policies. In another twenty-three states, the chief state school officer is appointed and subject to the control of an elected or appointed board. In the remaining five, the chief state school officer is appointed by the Governor, but in a state such as Pennsylvania, which does not allow the Governor to succeed himself, the chief state school officer can only be appointed in the middle of a particular Governor's term and thus will always be working with at least one Governor who did not appoint him. All of these variations have an indirect impact upon the effectiveness and viability of state educational departments.

In Illinois, for example, the weakness of the elected and partisan chief state school officer is generally acknowledged. It is fairly well documented that the Illinois School Problems Commission is the most important policy instrument within the state framework. Conversely, in New York the state educational agency has enjoyed the strong support of the Board of Regents and has long been recognized as a powerful and independent policy agency.

Without minimizing the significance of these variations, I think it is fair to say that all state educational agencies, in varying degrees, have encountered similar problems and taken on special characteristics affecting their capacity to handle and to implement the expanded federal programs.

First, in the majority of states, and especially in the more populous states, state educational agencies have not been an important and significant arm of the Governor in the preparation of his educational budget. In a number of states, communication between the Governor's office and the budgetary officials of the state educational agency has been virtually nonexistent. The articulation of educational demands has more often come from private educational agencies, particularly those units affiliated with the N.E.A. and various taxpayers' groups.

Furthermore, state educational bureaucracies, with few exceptions, have not been the agencies that have presented educational demands to the state legislatures. In state after state, the leaders of private interest organizations were far more prominent in articulating educational needs than were chief state school officers and their staff. James B. Conant states:

> More often than not the state public school leaders (the state establishment, if you will) have worked against the development of a strong state department, for the obvious reason that they feared they could not control it. The old "bogey" of political patronage has been used as the chief argument as to why the professional (meaning only the teachers, administrators, and professors of education) should have full sway There may be a few states where this fear of politicians may be justified, but the answer lies not in excluding state officials altogether, but in having a strong nonpolitical alignment of the forces of all educators and laymen.[1]

Second, despite rather elaborate efforts in recent years, the working relationships between the various components of the higher education system and state educational agencies have been confined largely to such matters as certification of teachers and accreditation of teacher preparation institutions and vocational instruction. Even this has come under severe criticism by such outstanding critics of the American educational system as James B. Conant. Efforts to extend the relationship beyond these have, until most recently, met with little or no success. We have entered a period when large universities are significant and powerful interests within the states, capable of mustering considerable resources in the presentation of their demands to state governments. It is unlikely that such interests would be willing to yield their automomy to comport with the plans of state agencies.

The ties of the various state education departments with national organizations have been confined to affiliation with N.E.A., groups primarily concerned with elementary and secondary education. These state departments have not had, in the past, any significant liaison relationships with such groups as the American Association of University Professors, the American Council of Education, the American Association of Land-Grant Colleges and the American Association of Junior Colleges. It is significant also that the Association of State School Officers is housed in the N.E.A. building, although no official tie exists between the two organizations.

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[1] James B. Conant, Shaping Educational Policy (New York: McGraw-Hill, 1964), p. 33.

Recently, however, a new organization has emerged which does blend to some extent the components of the higher education system with state departments of education. It is important to note that representatives of the state departments of education are vitally involved in the activities and deliberations of the new Interstate Compact for Education. This new agency, if it develops in the way it is planned, may become a bridge at a national level between the various interests involved in higher education and those traditionally associated with elementary and secondary education. It is much too early, however, to tell exactly what direction this compact will take and what impact it will have on the current situation.

The use of state commissions may be viewed as a significant development in the area of state administered federal assistance programs because such commissions may be entirely new agencies with members appointed by the Governors, who may or may not draw on the traditional state agencies and departments in making their appointments. In fact, in California and Ohio it is the coordinating agency and the Board of Regents, respectively, that receive and administer funds under Title I of the Higher Education Facilities Act of 1963. The use of these agencies at the state level has the additional consequence of making them more than advisory in the coordination of educational policies.

Some observers are concerned over the establishment of such agencies. For example, "Higher Education and National Affairs"--the bulletin of the American Council on Education (June 23, 1966)--reported that Dr. Logan Wilson, President of the Council, said, "Federal actions since 1963 have given state governors important new appointive powers relating to education. These new powers have reduced the possibility of federal interference," he said, "but only at the cost of imposing another layer of state agencies between academic institutions--private as well as public--and their sources of support." While the Bulletin does not explicitly state that Dr. Wilson was referring to the creation of state commissions under the two programs mentioned above, that seems to be the most reasonable inference. If it is a valid one, the use of these commissions may become, in the future, a matter of some controversy.

Third, state educational agencies for many years have had little or no rapport with the largely autonomous urban school systems. And. until recently there seemed to be little desire on the part of many state educational agencies to concern themselves with the problems of the large urban communities. Only recently, for example, in the State of Pennsylvania, the city of Philadelphia adopted its own educational home rule charter, which virtually divorces policy-making with respect to the Philadelphia schools from the state educational authorities. A former Illinois state superintendent once remarked that the city of Chicago has its own special educational problems and that his agency did not bother with those problems. The same pattern is repeated in New York, Michigan, and California, where the large urban areas enjoy special legislation and considerable independence.

The enormity of the question of racial integration as it faces the nation's urban school systems is hard to appreciate. A measure of the problem of achieving a racial balance in metropolitan education systems is reflected in recently published figures:

TABLE I

PERCENT OF PUBLIC SCHOOL PUPILS WHO ARE NON-WHITES[1]

District of Columbia	90.0%
Suburbs	7.6
Baltimore	61.0
Suburbs	8.6
St. Louis	60.0
Suburbs	9.2
Philadelphia	56.0
Suburbs	8.5
Detroit	55.0
Suburbs	5.0
Chicago	52.0
Suburbs	3.9
Cleveland	50.0
Suburbs	.9
Cincinnati	40.0
Suburbs	5.1
Pittsburgh	37.0
Suburbs	4.9
New York	27.0
Suburbs	4.7

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[1] *Congressional Record* (Oct. 4, 1966), p. 24053.

TABLE II

CHANGING RACE RATIOS IN MAJOR CITIES AND SUBURBS OUTSIDE THE SOUTH[1]

	Percent Negroes in the Population	
Areas	1950	1960
District of Columbia	35.0	53.9
Suburbs	8.6	6.1
Baltimore	23.7	34.7
Suburbs	10.1	6.7
Newark, New Jersey	17.1	34.1
Suburbs	5.7	6.7
Detroit	16.2	28.9
Suburbs	4.9	3.7
St. Louis	17.9	28.6
Suburbs	7.2	6.1
Cleveland	16.2	28.6
Suburbs	.8	.7
Philadephia	8.2	26.4
Suburbs	6.5	6.1
Chicago	13.6	22.9
Suburbs	2.8	2.9
Cincinnati	15.5	21.6
Suburbs	4.2	3.4
Kansas City, Mo.	12.2	17.5
Suburbs	8.9	5.9
Pittsburgh	12.2	16.7
Suburbs	3.5	3.4
San Francisco--Oakland	7.8	14.3
Suburbs	5.2	4.8
New York	9.5	14.0
Suburbs	4.4	4.8
Buffalo	6.3	13.3
Suburbs	1.5	13.6
Los Angeles	7.9	12.2
Suburbs	2.0	3.1
San Diego	4.5	6.0
Suburbs	1.0	1.1

The urban situation illustrated by these figures is one of an increasing and impressive racial imbalance as Negro migration into the city fills the residential gap left by the suburb-bound white community. Residential segregation in the cities and the "neighborhood school" concept have resulted in a defacto-segregation of metropolitan school systems.

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[1] Congressional Record (Oct. 4, 1966), p. 24053.

Many of the alternatives open to the state or city education administrations for dealing with defacto segregation are not particularly attractive nor can they gain the necessary public support. In view of the limited power of most state departments of education, effective action seems more unlikely. The New York City school system has pioneered in the field of its schools by busing. In 1963, State Education Commissioner, James E. Allen, Jr., ordered all schools in the public school system to erase the enrollment patterns which had led to the creation of "white" and "Negro" schools. The June 19, 1963 Washington Post reports Commissioner Allen's "historic decision" that

> children have a right to attend schools with a cross-section of other ethnic groups even if it means transferring them to schools outside their own neighborhoods... "Racial imbalance" in a public school cannot be justified by the fact that it reflects the makeup of its neighborhood.[1]

Allen's forceful action, and similar directives of a few other state education leaders are significant. However, their stand is the exception rather than the rule. Moreover, not only are most state departments of education lacking in formal, legal authority, they are also in no position to weather the intense opposition that a decision such as Allen's would raise. In the majority of states, the chief state school officer would have to go to the legislature or perhaps even to a constitutional convention--either one a difficult proposition--to get the necessary authority. With existing limitation on their authority, state departments of education are not even in a position to propound the question.

Yet, the question of racial segregation in urban school systems must be faced by the states as a crucial determinant in their relationship to the Federal Government's policies regarding aid to education. Federal reluctance to grant funds which will benefit and perpetuate a segregated school system places the state departments of education in an extremely difficult position.

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[1] Washington Post, (June 19, 1963), p. A8. Quoted, Congressional Record, (Oct. 4, 1966), p. 24054.

Even if the chief state school officers had the power to reverse the imbalance by transfer or busing, or to enforce such an order should it be made, they would still not have an effective solution. Busing creates problems which are almost as difficult to handle as the one which it is intended to solve. In the face of pressures which would result from the enforcement of a transfer program, the negative government sanction of withholding state funds simply is not functional. Neither the state, nor the Federal Government can deny an adequate education, and the chance for a better one to students in a school even if the government does not sanction the composition of the particular school's enrollment. There seems to be no immediate solution to the dilemna of a state department of education aware of its position and aware also of the needs of the school system but restricted in authority. That this situation will continue to raise real questions about the nature of the state-federal relationship in the field of education is obvious.

State departments of education have not been, for both constitutional and political reasons, very much concerned with private and parochial schools. The 1965 Elementary and Secondary Education Act did, however, include substantial funds for innovations in the area called "cooperative education" which makes such things as television, books and other educational equipment and facilities available for private and parochial school use. Although these programs usually involve a state plan, the policy and administrative decisions have been primarily worked out at the local level with little or no state department of education participation.

Along this same line, available evidence indicates that the staffs of most state educational bureaucracies have been recruited from rural or medium-size school districts, and that the overwhelming majority of them have been trained in professional education. These staffing practices have introduced biases tending to alienate certain groups within the higher educational framework, specifically Liberal Arts professors. Such practices also tend to build staffs exclusively or primarily oriented toward the problems of local and medium-sized school districts. Consequently, state educational agencies have not been noted for their initiative or leadership in such areas as school desegregation, education of the Negro, youth unemployment, juvenile delinquency, and sundry other problems that are generally urban in character.

There is another characteristic shared by state departments of education. Educational policy-making at the state level has been constitutionally and statutorily limited, and state departments of education placed in a restricted role. Institutions of higher education, for example, frequently have independent constitutional status which limits the authority of the state department of education insofar as these institutions are concerned. Another example of this sort of restriction is the fact mentioned above that in most states the constitution sets out the method of appointment and the responsibilities of the chief state school officer and may stipulate in detail the structure of his department. In such a case, a major or even minor procedural or organizational change requires a constitutional amendment. Moreover, many states are dominated by special interests that tend to restrict additionally, or control the outlay of state money for education. In New Jersey, for instance, education is financed at the regional and local rather than the state level--a practice that gives greater autonomy to local political educational authorities. In this situation, the power and influence of the state department of education is definitely weakened as a positive innovative force. It can and sometimes does, however, retain considerable strength in a negative or restrictive way; i.e., a political force for perpetuation of the status quo. New Jersey, again, at least until recently, serves as a classic example.

Finally, chief state school officers share a common fear of federal control which makes state departments of education generally reluctant, despite the extensive financial problems of state educational systems, to accept outright federal aid. A recent study points out that

> State political leaders frequently have opposed the idea of federal aid on ideological grounds--an opposition that has ensued largely because the political basis of support of such leaders has been comprised of anti-federal aid groups. Often, too, there has been little indication of a base of support for federal aid within the various state constituencies, with the members of state education associations themselves sometimes divided on the issue. With the spectre of federal control so widely feared it is not surprising that the inadequacies of a state educational program can be--and often are--explained in terms of the alleged debilitating effects of federal compliance regulations.[1]

It must be realized, however, that whatever useful function the emphasis of these fears serve within the state educational system, they are not entirely unfounded. If federal money is being expended it is almost inevitable that it will be accompanied by regulations as to how the expenditure will be carried out. If these limitations do not constitute real "federal control" they at least pose a substantial challenge to state autonomy in all phases of educational decision-making. Moreover, the requirements of federal accounting have posed a real problem in state-federal relationships, which strongly affects federal aid to education. Frank H. Weitzel, the Acting Comptroller General of the United States, made the point in the following manner in his testimony before the Joint Committee on the Organization of the Congress:

> Now, I do have to point out that in the area of HEW we are in a special area of Federal-State relationships in which Congress in its wisdom has set up some special working relationships with the States. Under the setup of a department like HEW and its ongoing programs in the Federal-

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[1] Nicholas A. Masters and Lawrence K. Petit, "Some Changing Patterns in Educational Policy Making," Educational Administration Quarterly (Spring, 1966), p. 91

> State field, there has been a problem in the past of having the Federal Government have the say as to what is really needed for proper financial management of that program. There has been an emphasis on not interfering with the administration of these programs on the State level...
>
> In many cases in HEW programs there is a specific deal, a sort of magic formula, that the money will be paid to the grantee prior to the audit or settlement by the General Accounting Office, This language... was intended to keep the Comptroller General from interfering with the smooth functioning of the programs at the State level.[1]

Also at the federal level we cannot ignore the fact, and this has very real implications for the state education departments, that the Federal Government is moving more and more to program budgeting. This tendency will involve the Congress in a more direct and more detailed evaluation of government educational policy as a whole than has been the case in the past. It will also involve an overall, rather than a compartmentalized evaluation of federal education programs. In such a case, congressional response to the problem of educational policy formation on the federal level will be increasingly specific.

Returning to the questions we raised earlier, it is evident that a number of changes will have to come about if the traditional state agencies are to play any significant role in the formulation and/or execution of educational policies under the new federal programs. Certain general conclusions are evident without implying, of course, that they apply with equal force to each state.

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[1] See the testimony of Acting Comptroller General Frank H. Weitzel in: "Joint Committee on the Organization of Congress," hearings before the committee, 89th, 1st, 1965, part 9, p. 1401

First, the new federal programs clearly imply that state agencies will have to pay much closer attention to the specific and immediate problems of the large urban areas if they are to survive as effective organs of policy and administration. Pending legislation in Congress makes it very evident that the Federal Government is quite concerned with urban problems. It is unlikely that Congress would continue to channel funds for education, one of its great concerns, into agencies that are unable or ill-equipped to meet those problems.

Obviously, this implies that the traditional state departments and agencies will not only have to expand their staffs and alter their basic biases, but also that they will have to recruit people trained to meet the special needs of educating people at all levels, and most especially in the modern metropolis. A staff capable of meeting these needs would have to include sociologists, urban specialists, economists, people trained in administration of higher education, and budgeting and finance. The latter is particularly important if the state department of education is going to function as an arm of the governor in preparing the educational budget. In such a case, existing salaries and recruiting procedures may be totally inadequate.

It may not be possible to implement such changes because of the inadequacy of existing state organization structure. In Illinois and Indiana, for example, the partisan elected chief state school officers do not command the respect and support of the leaders of the large urban school systems. These leaders have recommended, and in some instances demanded, direct federal aid to urban school systems. In other words, when existing organizations are found wanting, when they clearly cannot fulfill functions demanded of them by new circumstances, they are by-passed. We already have evidence of this tendency in the community action programs under the Office of Economic Opportunity, which deal with such vital educational functions as "Headstart" and "Upward Bound."

Second, these new federal educational programs will force certain vital administrative decisions upon state governors. Projects of such financial and substantive scope will obviously require governors either to adapt existing administrative structures to deal with them or force him to devise or adopt new devices for that purpose. It is possible that some governors may decide to use existing state educational agencies. The prospects for such a trend, however, are not very bright in view of the gap that already exists between state chief executives and state educational agencies.

It seems much more likely that many state governors will establish new coordinating devices to handle the new workload. These tendencies will unquestionably be reenforced by the indifference or antipathy that already exists between the large higher education institutions and the state agencies. Although I lack precise figures, roughly half of the states are using agencies other than the traditional state education department or agency.

I do not wish to imply that nothing is being done to change the picture. In the state with which I am most familiar, Pennsylvania, a concerted effort is being made by the state superintendent to reshape and reorient the department of public instruction to make it a vital arm of the governor in the formulation of state educational policies. It is his contention that the primary weakness of state educational agencies has been their wall of separation with other elements of state government as well as the private sector. The separation, he contends, may have been functional at one time in order to preserve the apolitical character of public education. The force of new circumstances, and particularly the political character of educational programs today, have rendered such a policy dysfunctional.

Moreover, the Federal Government has, until Title V of the Elementary and Secondary Education Act, attempted to correct a growing imbalance between state and federal authorities by giving direct grants to strengthen education departments. These include such items as improvement of staff, computer use and statistical services generally.

Finally, there has been a traditional association between the state affiliates of the National Education Association and most state departments of education. They have generally shared common views and approaches to educational policy. In past years, the Office of Education has shared in this relationship, in this association with the N.E.A. and what it stands for. This is no longer the case. The Office of Education has embarked on a course that involves markedly different policy approaches.

The ramifications of this development are certain to be profound. The Office of Education now has the power to implement its point of view through its suzerainty over many aspects of the new federal education programs we have been discussing. Is it likely that this office will want to channel its efforts into state agencies with which it does not share a common approach to educational problems? I think not.

This will present state educational agencies with severe choices. They may choose to retain their present associations and learnings, in which case they will run the danger of being frozen out of the new programs. Or they may attempt to adapt themselves so that they can participate as fully as possible in the new programs.

CHAPTER VIII

EMERGING ORGANIZATIONAL STRUCTURES FOR FACILITATING EDUCATIONAL CHANGE WITH IMPLICATIONS FOR STATE EDUCATION DEPARTMENTS

Francis A. J. Ianni*

Ianni suggests that the new organizations for educational change, such as the educational regional laboratories, present the state education department with an opportunity as well as a challenge. He indicates that the state education department must assume a major responsibility for the implementation of educational change within the existing structure of the schools. To survive the massive changes which are predicted for it in the coming decade the author asserts that, the state education department must take an active role in organizing for change, and for working through new change organizations for achieving institutionalization of new practives.

For some time now, behavioral and social scientists have been studying the diffusion or spread of innovations within behavioral, social and cultural systems. Psychologists have long been concerned with how individuals learn new patterns of behavior and sociologists with the spread of new social patterns in the interactive system of a society. Anthropologists, whose experience in both diffusion and innovation antedates the interest of their fellow social scientists, have a rich and extensive literature on how new facts and artifacts are diffused within a culture and between cultures. Similarly, economists, political scientists, historians and social geographers have examined the process in their respective areas of interest. While each discipline has used a different analytic scheme and focused on distinctive types of problems, they have arrived at remarkably similar conclusions by the process of independent invention. Generally, six crucial focal points are identified in the systematic study of diffusion:

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(1) the conditions within the system which lead to the innovation;
(2) the innovation itself and its origin within or without the system;
(3) the mode and conditions of communicating the innovation among the elements of the system;
(4) the organizational analysis of the system in which the innovation is to be diffused;
(5) the process of behavioral or operational modification by which the innovation is adopted with or without modification; and
(6) the fate of the innovation and the process by which it becomes obsolete.

Gradually, over the past decade, the field of educational research and development has come to appreciate the importance of studying the process by which the new technologies of education--both hard and software--can be diffused throughout the educational system. There was, of course, always interest among educational researchers in both innovation and diffusion, as brilliantly exemplified in the work of Paul Mort three decades ago. As important as such research was, however, it was primarily of academic interest since neither the innovations for diffusion nor the interest of the system--both educational and public--were at a sufficient level of development to produce any national concern. Today, however, we are faced with new educational and social imperatives which demand, rather than suggest, that the diffusion of the results of the new intellectual and technical revolutions be made readily and speedily available to the schools. Now, a profession grown chary of rushing off to attempt massive programs of renewal, without adequate knowledge of how to bring it off, is searching about for some means of bringing order out of chaos by charting what is to be done and how to do it before having at the task. Perhaps unwittingly, and certainly, without relying on any formal theory of diffusion, educational research is nevertheless moving in a direction which is beginning to give some educational answers to the six problem areas described above. Attempts are now being made, for example, to create new models of organizational structures for the study and conduct of educational research, development and diffusion by involving major elements of the educational system in the process of creating and disseminating knowledge. What is really significant about these models is that in every case, they refuse to be satisfied with a dichotomization of research and seeing the research into practice.

The purpose of this paper is to look at one such model--the Regional Educational Laboratory--in detail, as well as to describe other organizational structures which have been suggested--then to consider briefly what various theories of diffusion might suggest about facilitating educational change through these new organizations--and finally to speculate a little on the implications all this holds for state departments of education.[1]

The Emergence of Educational Laboratories

The attempt to create new structures to facilitate educational change stems from the growing concern for quality as well as equality in education. The first evidence of this concern on a sufficient scale to garner national attention, was the formation of the Physical Science Study Committee which in 1956 brought together fifty first-rate physicists and teachers to develop a one-year physics course which was completed in 1960. Other similar efforts such as the School Mathematics Study Group, and the Biological Sciences Curriculum Study soon followed. These projects were largely university based but a number of projects became centered in a new, non-profit institution started by a small group of curriculum reform enthusiasts--Educational Services Incorporated.

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[1] Many of the ideas on what a laboratory should be and some of the material on diffusion models is drawn from several papers by Barbara D. McNeill. Miss McNeill was part of a small but determined band of bureaucrats who drew up the initial plans for the Laboratory Program of the Office of Education.

These efforts developed largely out of the concern of the scholar and the scientist that his particular discipline was not being taught to youngsters as well as it might. Scholars, accepting responsibility for the way their discipline was taught in the schools turned to the task of curriculum revision with a vengence. As Jerrold Zacharias and Stephen White explain:

> ...it remains difficult to presume that the gulf between the professional practitioner and the general student is a necessary consequence of the student's incapacity or unreadiness. If any charge of incapacity or unreadiness is to be laid, it must now be upon the professional scholar himself, who has been either incapable of presenting his discipline in an appropriate manner or unwilling to divert himself from his specialized activities to make the requisite effort.[2]

Zacharias and White go on to explain that it was necessary to start by revising discrete units of the curriculum, although the "reformers" were quite aware that the educational process should ideally be treated as a system. They saw curriculum revision as a process of development using teachers and classrooms as well as scientists and laboratories and with continuous trial, feedback and revision. They realized at the outset that a variety of talents were needed in the process of educational innovation. The importance of reaching the classroom teacher with the revised materials was recognized; special teachers'rs' guides and institutes were not viewed as a solution for the much broader problem of the initial training of teachers for an understanding and appreciation of the process of educational innovation. But that was yet another problem--a problem which had to await reform in teacher education.

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[2] Jerrold Zacharias and Stephen White. "The Requirements for Major Curriculum Revision," New Curricula, ed. Robert W. Heath (New York: Harper & Row, 1964), p. 69.

The "curriculum revolution" was, nevertheless, underway and, like it or not, it was the first attempt at educational innovation on a scale that matched the problem.

The first of the large curriculum projects were math and science oriented and were financed primarily by the National Science Foundation. In 1962 the Office of Education also joined in and began to support curriculum development projects as part of the new "programmed research" activities under the Cooperative Research Act. As I explained it then, this program was the first step down a long road to new patterns of organization for research and innovation:

> The trend in most fields of research has been to move from the project approach to the next stage of research mobilization--program research--where pre-planned, continuous attention, through all steps in the research process is focused on persistent problem areas until solutions are found and translated into practice. Thus, one group of researchers follows a research program from development through demonstration. The intermediate steps of basic research, curriculum development and field testing are also a part of the program. Under ideal conditions, the same team of scholars, research scientists, teachers and school administrators work continuously on all phases of the program.[3]

Growing out of these notions of continuous programs of research, development and dissemination with broad involvement of universities, state departments of education and local schools came two new organizations; the Research and Development Center and, more recently, the Regional Educational Laboratory. Actually, most of these ideas had been kicking around in education for some time. All that remained was to find some way of bringing them about.

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[3] Francis A. J. Ianni and Lois S. Josephs, "The Curriculum Research and Development Program of the U.S. Office of Education: Project English, Project Social Studies and Beyond," p. 166.

The Research and Development Center program was started in 1963 with the express purpose of providing an environment for major, long-term programs of research and development. We believed firmly, if naively, that such centers could reduce substantially the lag between research and practice by making new ideas available to the schools. Since 1963 the following research and development centers have been established:

Learning Research and Development Center
University of Pittsburgh, Pennsylvania

Center for the Advanced Study of Educational Administration
University of Oregon, Eugene, Oregon

Center for Research and Development for Learning and Re-education
University of Wisconisn, Madison, Wisconsi

Center for Research Development on Educational Differences
Harvard University, Cambridge, Massachusetts

Center for Research and Development in Higher Education
University of California, Berkeley, California

Research and Development Center in Educational Stimulation (Ages 3-12)
University of Georgia, Athens, Georgia

Research and Development Center for Teacher Education
University of Texas, Austin, Texas

Center for Research and Development in Teaching
Stanford University, Palo Alto, California

As significant a step toward new organizations for educational innovation as these Centers represented, they could not and should not have been expected to meet the most immediate needs of the nation's schools. Primarily research oriented, and usually based in a single institution, they answered the need for creative new ideas; but not for the translation of these ideas into materials and techniques, or for the diffusion of either ideas or practices to the schools. To meet these more pressing needs, we developed and proposed to the Congress as part of the Elementary and Secondary.Education Act of 1965, a new instrumentality for creating and diffusing innovative programs--educational laboratories of comparable size and scope to the best in science or agriculture. The name Regional Educational Laboratory was finally settled on to express their experimental nature and to underline their relationship to the existing educational institutions in a region of the country. The laboratory program was specifically designed to focus the educational, scientific, cultural and other resources of all parts of the nation on immediate development of new programs for quality education through research, development, dissemination and training in educational innovation. The Congress authorized this program under Title IV of P.L. 89-10 and appropriated $100 million over five years for constructing labs and $45 million for setting up the new program in fiscal year 1966.

To date the following laboratories have been started:

Southwestern Cooperative Educational Laboratory which includes Arizona, New Mexico, Texas, and Oklahoma is located in Albuquerque, New Mexico

Research for Better Schools, Inc. which includes southeastern Pennsylvania, southern New Jersey and Delaware is located in Philadelphia, Pennsylvania.

Far West Laboratory for Educational Research and Development which includes northern California and northern Nevada is located in San Francisco, California

Central Midwestern Regional Education Laboratory, Inc. which includes eastern Missouri, southern Illinois, Kentucky, and central and western Tennessee is located in St. Louis, Missouri

Mid-Continent Regional Educational Laboratory which includes western Missouri, eastern Kansas, eastern Nebraska, and central Oklahoma is located in Kansas City, Missouri

Northwest Regional Educational Laboratory which includes Alaska, Idaho, Montana, Oregon, and Washington is located in Portland, Oregon

Rocky Mountain Educational Laboratory, Inc., which includes Colorado, Utah, Wyoming, Idaho, Montana, Arizona, Kansas, and Nebraska is located in Greeley, Colorado

Appalachia Educational Laboratory which includes West Virginia and the Appalachian counties of Virginia, Tennessee, Kentucky, Ohio and Pennsylvania is located in Charleston, West Virginia

Southeastern Educational Corporation which includes Florida, Georgia, and Alabama is located in Tallahassee, Florida

Upper Midwest Regional Educational Laboratory which includes Iowa, Minnesota, North Dakota, South Dakota, and Wisconsin is located in St. Paul, Minnesota

Center for Urban Education which includes the metropolitan New York area is located in New York, New York

Southwest Regional Laboratory for Educational Research and Development which includes southern California, southern Nevada and Arizona is located in Santa Monica, California[*]

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[*] Grants have also been made for the following Developmental Regional Educational Laboratories since Ianni submitted his paper:

Education Associates
c/o Educational Services, Inc.
continued--

Each of these laboratories is still in its early stages of development so it is probably too soon to predict exactly how they will eventually take shape. But we can talk here at least about what was intended. We hoped, for example, that laboratories would be concerned with a wide spectrum of activities including basic and applied research, curriculum development and evaluation, demonstration projects, staffing and operating laboratory schools, clearinghouse operations for research and curriculum materials, and a variety of training and other dissemination activities. Education was to have for the first time, the ability to support on a large scale comprehensive and continuous programs beginning at the research planning stage and extending all the way through the diffusion stage. Furthermore, provision was to be made to attract and involve the entire range of talents necessary to research, develop, and diffuse innovations throughout the schools. Each laboratory was to be

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* 55 Chapel Street
Newton, Massachusetts 02158

Eastern Regional Institute for Education
Syracuse University
Syracuse, New York 13210

Mid-South Regional Educational Laboratory
c/o Learning Institute of North Carolina
Quail Roost Conference Center
Rougemont, North Carolina 27572

South Central Region Educational Lab. Corp.
National Old Line Building
Little Rock, Arkansas 72201

Michigan-Ohio Regional Educational Laboratory
School Center Building
Detroit, Michigan 48202

Southwest Educational Development Corp.
Commodor Perry Hotel
800 Brazos Street, 5th Floor
Austin, Texas 78767

Cooperative Educational Research Lab., Inc.
1102 West Main Street
Urbana, Illinois 61803

a large-scale, multi-disciplinarian, multi-functional and multi-institutional operation drawing on all segments of the educational community. Facilities for the laboratories, as contrasted to the Research and Development Centers, were likely to be scattered throughout a particular region or even, it was suggested, throughout the entire nation. No single model was proposed but rather it was recognized that laboratories might vary in function, size and staff. It was not anticipated that all labs would spring forth full-scale for in some cases it would take years for a laboratory to develop. We did feel, however, that labs would develop throughout the country over a period of time through the cooperation of groups of institutions and organizations in each region which would initially support some of the component activities of a laboratory while building up to full scale operations.

Research was still to be an important function of labs but new emphasis was to be placed on engineering research results into forms to be used in classrooms, for continuous testing of these forms, for training teachers in their use, and for making them available to school systems. To introduce educational innovation into a particular region of the country a laboratory was to draw not only on its own research and development activities, but also on that done by other laboratories, by research and development centers, and by other organizations and agencies active in similar activities.

Laboratories, it was insisted, would have close ties with the educational system at all levels, working intimately and constantly with state departments of education, colleges, universities, teacher education programs and local school systems. Each laboratory was to be associated in some way with "real" school systems and with operating public schools.

We envisioned associations with schools taking on a variety of forms. Newly constructed or converted experimental schools would allow for continuous programs of research, development and evaluation in the classroom; and demonstration schools or classrooms would be used for exemplary programs developed at the laboratory. An association with a laboratory would allow any school or district to field test and evaluate techniques and materials already developed, or merely to share the services provided by laboratories.

It is interesting to note here that the same staff in the Office of Education, developed the initial specifications for the Supplementary Educational Centers established under Title III of the elementary and Secondary Education Act, and planned cooperative relationships between them and the laboratories. The Supplementary Educational Centers were conceived as new means of meeting the specific needs of various communities for educational programs and facilities not available in sufficient quantity or quality in regular school programs. The importance of building flexibility, innovation, and experimentation into Center activities was stressed. Centers could, for example, serve to demonstrate innovations developed by laboratories. They could, in effect, become demonstration centers for labs. This aspect of the Supplementary Educational Center Program is still of vital importance for planned educational change, and future reference to demonstration facilities of labs should be understood as applying to the demonstration aspect of the Center program as well.

In addition to educational institutions, the laboratory was expected to welcome into association a variety of educationally oriented groups: professional and regional associations; community, civic and service organizations; libraries and museums; private foundations; institutes and business and industry. Despite its rather foreboding and monolithic title, the laboratory was never conceived of as a building or a group of buildings, but rather as an association of interdependence among all of the agencies with a stake in education.

Specifications for the operational charter of the laboratories were also prepared. Research was to take place in an atmosphere that encourages open-endedness of inquiry and actively supports the researcher's curiosity. This type of atmosphere is essential to the laboratories if they are to attract researchers to develop test theory and expand knowledge which, ideally, gives action its direction. No specific organizational structures or facilities requirements were mandated, but generally it was recognized that both should be designed to nurture the creative talents necessary to meaningful innovation. For example, the importance of adequate and appropriate research administration was anticipated, as well as the need to train a new breed of research administrators, whose specific function and interest, focus on the administration rather than the conduct of research. Furthermore, it was expected that labs would make available to their researchers any necessary support or technical staff such as art, editorial media, statistical and psychometric specialists.

Curriculum development was envisioned as an end in itself and also as a stimulus and support for teacher growth by stimulating new ways of teaching, new theories of instruction and new content. By involving institutions of teacher education in lab activities, prospective teachers could be made aware of the process of innovation from the very beginning of their training. Inservice teachers could be involved in the innovative process through experimental schools and also through cooperating local schools and demonstration centers. One important curriculum activity planned for the laboratories was the development of new materials for preparing teachers and for teachers of teachers.

The need for creating and training a new variety of dissemination specialists was also foreseen. A specialist in education technology, his role would be that of diffusion agent in seeing innovations into practice. More than a copy of the country agent in agriculture, he would also be involved in evaluating new programs.

Exemplary programs and model demonstrations were viewed as other important links in the diffusion process. These activities were to be means by which educational decision-makers as well as educational practitioners could observe the usefulness and, if you will, even the efficiency of a particular innovation.

The much maligned but still potent means of dissemination through the printed word was not declared obsolete for it was recognized that newsletters, monographs and sample curriculum guides perform a vital function, if properly used and directed toward prepared, receptive audiences. Finally, an information storage and retrieval system linking each lab was considered essential, although the mechanics of such a system were not specified. The network of information centers was to be coordinated with the Office of Education's own Educational Research Information Center.

Diffusion Research

Like similar models of organization, the laboratories were established specifically for the purpose of initiating and facilitating, or diffusing, educational change. The decision was made to involve the educational system at all levels because of the belief that individuals at each level had something unique to contribute to the process of innovation. Viewed more candidly, this means that the laboratories were involving elements in the system within which they were to diffuse innovation. This device, certainly not a new one but still important, follows the principle in diffusion research which suggests that an important element in the diffusion process is the preparation of the system in which the diffusion is to occur to accept the new element.

But merely involving elements of the system is not enough to assure adequate diffusion within it; deliberate plans to diffuse information must be developed, taking into account the form and timing of presenting information, and characteristics of the specific audience that is to receive the information. In the long run, programs which develop an innovation readiness in the "audience," an understanding and appreciation of the innovative process, may be more important than specific interventions on the behalf of specific innovations. In fact, innovations which are judged failures often have a degree of success in that they create an awareness of need in the audience. At the same time plans and procedures which capitalize on characteristics of the diffusion process which can be manipulated to speed adoption can be extremely useful. Although we are just beginning to understand the nature of these characteristics, knowledge about them and skill in manipulating them will be essential to the success of any new organizational structure designed to facilitate educational change. A respectable rule book of these principles may be derived from a synthesis of previous studies on the successes and failures in diffusing innovations. Most of these studies have been carried out within the isolation of each of the specific traditions of diffusion research of anthropology, social psychology, rural, urban and medical sociology and to a lesser extent, education.

Let me warn you at the outset that diffusion theory related to modern society has not yet reached the level of sophistication at which it can provide education with immediate solutions to many of its unique problems. Ironically, one reason for this is that until recently the various traditions of diffusion research remained for the most part isolated from one another--failing to diffuse among themselves. A second reason is that despite the current popularity of analogies, education as a system differs from medicine, agriculture, or industry as systems and the process of diffusion may well have a different character in each system. What education in general and the labs in particular must set as a first task is the testing and refinement of principles emerging from other traditions of diffusion research. And, hopefully, education will be able to add to the fund of knowledge from which a generalized theory of diffusion may be synthesized. What I would like to do here is suggest just a few principles drawn largely from my own discipline of anthropology which seem to me particularly relevant to the interests of organizations seeking to facilitate educational change.

Diffusion research in anthropology and more recently in business suggests that "divisibility," or the degree to which an innovation can have a "trial run" before it is massively installed, has an important effect on the rate of acceptance of the innovation. We see this principle operative on a wide scale in industry in market research and sample testing of new products. It is even common in family life where the artful daughter tries an idea out on father before exposing it to the scrutiny of mother. This principle is particularly important in the early stages of the adoption of an innovation. That is to say, when an innovation has not yet been installed by a large portion of potential users, it is quite important that the first potential users have an opportunity to give the innovation a trial run before adopting it themselves. What this suggests for laboratories and similar organizations is that they might well develop opportunities for teachers, principals, superintendents and other users to try out various innovations either in demonstration schools or through other methods of simulation.

A second principle from diffusion research which is of some importance in education is that things are more easily diffused than ideas or, as the anthropologist puts it more elegantly, a cultural system is more resistant to borrowing customs and beliefs than tools and machines. The reality of this principle in education is attested by the experience of any observer of the recent trends in educational technology. The rush to buy new machines and electronic gadgets is now underway. In fact, of the roughly $1 billion made available to the schools under Title I of the Elementary and Secondary Education Act for educational improvement of disadvantaged youngsters, over $200 million has gone for new electronic hardware (mostly junk) to date. But so long as school boards and parents can be impressed more easily by gadgetry than by pedagogy, this principle must continue as a caution in the diffusion of educational technology.

Probably the most pertinent finding in diffusion research is the well documented point that an innovation which contradicts the core values of a culture has very little chance of acceptance.[4] That is to say, an innovation which is consistent with existing values and which does not conflict too glaringly with the past experience of members of that culture will be more readily adopted. Here again the experience of educators is clear; programs of innovation which do not take into account the values of the establishment have little chance of success. This has been the bitter experience of the most promising of the recent innovations in education, the "curriculum revolution." In most cases the new curricula did not take into account the critical question of the teacher, and far more important, administrator acceptance. What could have been a "glorious revolution" is now in danger of being a minor coup d'etat largely as a result of this tactical blunder.

A third finding related to the previous discussion in that it grows out of the same principle and is also a characteristic of the recent attempts at curriculum reform, has to do with the auspices under which an innovation is introduced. The principle is a simple one: change generated from within a system is usually more readily accepted than change imposed from the outside. Thus, to paraphrase that cogent-if-conservative sociologist of the turn of the century, William Graham Sumner, when social doctors A (the Federal government) and B (the university scholar) get together to decide what they are going to do for C (the schools), C may be less than anxious to asquiesce to the changes. This is not, by any means a characteristic limited to schools, but rather is true of any system which has some sense of identity. Consider, if you will, for just a moment the success of a program where the Episcopalians and the Catholics confer, and then announce to the Southern Baptists their plan for the reform of the Baptist Church!

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[4] Cf. Francis A. J. Ianni, The Behavioral Sciences and Education.(Chicago: Science Research Associates, Inc., in press), chapter IV.

This principle has yet another application in education which is the increasing tendency to prescribe new programs to produce social change through education in the culture of poverty. Margaret Mead has described in brilliant fashion why this approach is doomed to failure unless we heed the message of diffusion research and understand the culture of poverty before we attempt to innovate within that system. Describing how any social change, no matter how small, cannot be put into effect unless they are accepted by the host culture she observed:

> We have learned the pleasing truth, that society talks back. Even the small-scale, technologically inferior peoples of the world have tremendous powers to resist changes they do not want, and to adhere, often at great cost, to their valued and distinct way of life. At the same time, we have learned that changes which people desire, radical or not, can be made swiftly, without great cost, and that a society may nearly redo itself --in a generation--if it wants to.[5]

There are other characteristics of innovations which have an important effect on the rate and extent of their adoption. Everett Rogers has analyzed and synthesized over 500 studies on diffusion of innovation from a variety of disciplines and isolated most of the important characteristics of innovations, including the ones already discussed. In addition to those I have already described, let me paraphrase and exemplify those he mentioned which I did not:

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[5] Margaret Mead, New Lives for Old. (New York: Morrow, 1956) p.

(1) An innovation has a *relative advantage* to the degree that it is perceived as superior to the ideas it supersedes. Thus a new idea won't make it unless it is judged superior to what is already being done.

(2) *Complexity* he describes as the degree to which an innovation is relatively difficult to understand and to use. The classic example here, of course, is the unrefined educational report which the school superintendent characterizes as taking what everybody already knows and putting it in language nobody can understand.

(3) *Communicability* is the degree to which an innovation or the results of an innovation are easily observed and communicated to others.[6]

Interestingly enough the economist, Charles Benson, also points to the importance of "communicability" coming at this concept through economic theory. Extending James S. Dusenberry's theory of consumer behavior to school board behavior, Benson states:

> Corresponding to the household's drive for self-esteem, we rely on the assumption that school boards prefer higher quality education to lower. The household is reluctant to change its pattern of consumption because it knows its potential savings will decline. The school board is reluctant to approach the taxpayers for an increase in rate. In both instances, action to spend is taken as and when the spending units come into repeated

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[6] Everett M. Rogers, *Diffusion of Innovations* (New York: The Free Press of Glencoe, 1962) pp. 124-134 *passim*.

> contacts with "goods" of a "superior" order.[7]

School boards, Benson explains, cannot and do not make decisions on the basis of specific and representative wishes of the tax payers. Furthermore, rarely do board members have enough information to weigh the relative merits of expenditures on one type of schooling or innovation as opposed to another. What happens then, is that school boards eventually become aware of "superior goods" or, in our case, innovations, through communication with school boards from other districts. For this reason, those innovations which are easily and quickly observed and described are generally the innovations that are adopted:

> Under the demonstration effect, preferential treatment falls inevitably to changes in expenditure which are concrete, specific, and dramatic. On the other hand, expenditures on in-service training teacher recruitment, the development of a workable scheme of teacher evaluation and research--items which in a slow, quiet way work for improvement of caliber of staff and development of educational methodology --may not fare so well.[8]

The demonstration effect is further intensified by the necessity of school boards to maintain fiscal responsibility--to defend their expenditures. The defense is easier when expenditures can be clearly described and when neighboring districts have already voted such expenditures.

Now the implication here, of course, is not that labs and other agencies should concentrate only on innovations that are concrete, specific and dramatic, but that they should be aware that they may have to employ special techniques to ensure the adoption of the "quieter" less demonstrable innovations.

Much of diffusion research focuses on the process of adoption of innovation, or the stages which an individual passes through from the time he first becomes aware of an innovation to the time he actually decides to continue use of the innovation. Rogers, again synthesizing from the 500 studies posits five stages:

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[7] Charles S. Benson, The Economics of Public Education (Boston: Houghton Mifflin Company, 1961), p. 107.

[8] Ibid., p. 108.

(1) In the awareness state the individual is, as the name implies, aware of the innovation, but he is not motivated to seek any other information about it. Impersonal communications, which do not involve a direct face-to-face exchange, are generally best able to generate the type of awareness required for this stage.

(2) In the interest stage the individual actively seeks additional information about an innovation. It would seem to be extremely important in education, for example, to ensure that information is presented in such a way as to answer clearly the kinds of questions the individual might be expected to have.

(3) In the evaluation stage the individual does not physically test the innovation but rather mentally weighs the innovation in terms of his present and anticipated future situation.

(4) In the trial stage the individual tests the innovation on a probationary basis. Generally personal experimentation seems to be necessary before innovation is adopted.

(5) In the adoption stage, the individual decides to continue use of the innovation.[9]

Information about an innovation can be presented in any of these stages in a variety of ways. Common techniques include the mass media, demonstration programs, the trial-participant technique which is a variant of the demonstration, or it can be presented through one's peers. Of particular interest is the possibility of transmission through a change agent, a professional who works directly with an individual or group attempting to influence the adoption of innovations. A successful technique in agriculture and medicine, it has yet to be tested in education.[10] It appears that the effect of presenting information in a particular way will vary depending on the stage at which it is presented. Furthermore, individuals differ in rates and times of adoption, and a particular form of information may have differing effects depending on the type of individual to whom the information is presented. It would seem particularly fruitful to pursue further research on how, when and to whom information should be presented during the adoption process. There is some fragmentary evidence from anthropology, for example, that most individuals do not adopt an innovation, they adapt it and what results is a mutation.[11]

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[9] Rogers, pp. 81-99. These stages are extracted and adapted from material on these pages.

The question of "to whom" information should be presented is an admittedly complex question--perhaps more complex in education than in other areas to which diffusion research is applicable. For in education a great number of individuals and groups of individuals are involved in the decision to adopt an innovation--superintendents, principals, local and state boards, teachers, and even the general public all become involved in one way or another in the process.

This suggests that it is important to ensure that attempts to diffuse innovations are coordinated and are operating consistently on all levels. There is evidence from research at the Center for Advanced Study of Educational Administration at the University of Oregon, for example, that school superintendents play the critical role in the introduction of an educational innovation. But the individual teacher must also accept and understand the innovation if her twenty-thirty students are to benefit. For once she closes the classroom door, even the administrator is outside.

Diffusion research suggests that one way to gain entry at the various levels is to work through "opinion leaders", or individuals influential in approving or rejecting innovations. These individuals have been referred to variously as key communicators, leaders, influentials, style setters and even "the club". The process of diffusion may be accelerated by reaching those opinion leaders who are most likely to adopt the innovation and influence others to do likewise. Research, again at the Center at the University of Oregon, suggests that certain highly respected superintendents do, in fact, play an important part in influencing other superintendents to adopt innovations. We might ask if the same holds among principals or individuals on a school board, or following Benson's analysis, among school boards. It might also be profitable to examine the implications of opinion leadership among teachers in a school or community. Other issues still to be clarified by further research focus on such questions as: how opinion leaders are identified; if they have influence only at one level of the educational hierarchy or if their influence may extend beyond their peers; and how opinion leaders are themselves influenced.

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[10] Some observers suggest that the commercial book salesman is the educational equivalent of the county agent in agriculture and the detail man in medicine. My own experience suggests that rather than transmit innovations, they huckster books, search for manuscripts and are a vital source of academic gossip.

[11] Felix M. Keesing, Culture Change (Stanford, California: Stanford University Press, 1953), p. 75.

So far we have considered the way in which individuals in a system are affected by various techniques of diffusion, the implication being that the organizational structures designed to promote educational change might incorporate promising techniques. An important and related question is how the system itself affects the process of diffusion. The two areas are, of course, interrelated Who actually makes the decision initially to innovate and what procedures if any does the system itself use to implement the decision? What barriers does the system erect against innovation? The issues involved in opinion leadership begin to involve us in questions of organizational analysis, and perhaps even the politics of education.

Organizational analysis has been one of the fastest growing areas of sociology in recent decades. While the totality of this fascinating area is outside the scope of this paper, there are some important convergences with the study of diffusion. Most students of organizational analysis identify two models of organizational analysis; the traditional or "natural system model" whose main leit-motif is maintaining of stability (or the status quo) and the "rational model" which is an "instrument" for the rationally conceived goals of the group, goals of the system within which it is operative.[12] We can dismiss the traditional or natural system model immediately, and indicate that one of its characteristics is that it is oriented to stability rather than change, and hence is generally resistant to innovation and seldom is an agent for it. The rational model, on the other hand, is best exemplified by the present day bureaucracy, and in this model, innovation has become a watchword. This is not to say, however, that where there is a bureaucracy, there one will always find a receptivity to bureaucracy. Certainly the bureaucratization of business and industry and of government has stimulated an innovative mood and has established means of diffusing new ideas and techniques. But education is a bureaucracy like no other for it has some special characteristics. Far larger than government, more diversified than industry, it has the rather peculiar aspect of being only partially bureaucratized. Because it is not a monolithic, single headquartered organization, education dances to the tune of thousands of fiddlers; there is no organizational structure within which there are free and open channels of communication and nothing approaching the self inspection system of other bureaucracies. As Barbara McNeil and I suggested recently:

> ...Nothing hinders educational progress as much as the absence of an organizational structure within the educational system, specifically designed to recognize obsolescence as well as plan innovation.... What is needed within federal, state, and local programs is a means and a willingness to test the results of research, to put into practice the best of tested innovations, and to view the school as the logical place for such testing. And since we live in an era where change has become a constant, we cannot depend on a single crash program of innovation. We need a system designed to accomplish its own continuous renewal through a constant process of

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[12] Cf. Alvin Gouldner, "Organizational Analysis," Robert K. Merton, Leonard W. Broom and Leonard S. Cotrell, eds., Sociology Today. (New York: Basic Books, 1958), pp. 404-405.

> experimentation and innovation. [Finally,]...a new emphasis...[is needed] on converting the new ideas emerging from research into forms that are usable in the classrooms, testing their use in schools, training teachers in their use and then diffusing the proven ideas to the schools.[13]

In education, as is readily observable in tracing the historical development of any highly innovative bureaucracy elsewhere, what is most critically needed is some clear institutionalized means of insuring that research, development and evaluation are clearly articulated with policy making at every level of government and that the results of research and evaluation are available in formulating and executing education. Many of us have recognized the importance of administrators as policy makers but Henry Brickell has summed it up best:

> The administrator may promote or prevent innovation. He cannot stand aside or be ignored. He is powerful not because he has a monopoly on imagination or creativity or interest in change--the opposite is common--but simply because he has the authority to precipitate a decision.[14]

It is in the wise and judicious use of this authority rather than in their wide variety of record keeping and regulating tasks that State departments have their most vital tasks and their greatest challenge.

Let me hasten to explain why I have confined my description of existing models for organizational structures aimed at educational innovation and renewal to the federally supported Research and Development Centers and Laboratories. One reason is that I obviously know far more about the construction and design features of these models than about others in which I did not have a hand. But there are reasons which go beyond mere casuistry or chauvinism. The Center and the Laboratory models are actually fairly representative ideal-type cases of most of the other models which have been proposed. The Center for Research and Leadership Development in Vocational and Technical Education which sponsors this conference, for example, is a variation on these models as are the various regional associations and compacts which are beginning to develop. The one difference in the latter case is that of federal support. Who among us, however, with the possible exception of the most unreconstructed Republicans, can believe that even these regional compacts can long survive without Federal support?

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[13] Francis A. J. Ianni and Barbara D. McNeil, "Organizing for Continuing Change," The Saturday Review, June 19, 1965, p. 55.

[14] Henry M. Brickell, "State Organization for Educational Change: A Case Study and A Proposal," Matthew B. Miles, ed., Innovation in Education. (New York: Bureau of Publications, Teachers College, Columbia University), p. 503.

The one model which does run counter to the Center and Laboratory models is the new "Compact of Education" proposed by James B. Conant, and assembled principally by North Carolina's ex-governor Terry Sanford. The principal aim of the compact is to bring together individuals with "practical experience" in state education, to undertake research studies of mutual interest and to serve as a buffer between the federal government and the local community. This model does differ from the "creative Federalism" which permeates the labs in that it does not see the federal government as a partner to those activities but rather positions itself as a potential middleman.

State Departments of Education

In this section our goal, in terms of systems analysis, is to integrate two systems which cannot function effectively in isolation. One element is the system of formal schooling with all of its federal-state-local machinery, containing subsystems of schools in which teachers, students and administrators function because of, or in spite of, the machinery. The second system is the one which has been discussed in this paper up to this point--the ill-defined organizational structure for systematic research, development and diffusion of educational innovation. The development of this second system began in earnest only about ten years ago; the process of meshing the two systems started at about the same time with the Physical Science Study Committee's attempts at involvement of teachers and classrooms. Now, with the growing concern for quality education for all children, it becomes essential to engineer the integration of the system designed to insure equality of education and the system designed to promote quality in that education.

The implication here is not that one system should envelop the other, but rather that both should exist as integrated wholes, relating in effect, like cogs in engaged gears. The labs should, for example, continue to operate administratively outside of the machinery of the formal schooling system. Schools on the other hand need not become involved in the administration and finance of research.

What role does this provide for state education departments? First let me admit that it is probably too early to say what the definitive role of state education departments will be in the laboratories and in similar organizations. But something can be said even now about what their role should be. What happens in the future will depend in part on how the laboratories develop in the next several years, but more important is what the state education departments themselves do to prepare for the new leadership tasks already beginning to confront them. There is ample evidence from diffusion research that change is usually more complete and effective when it comes from within a system than when it is imposed from without. This suggests that state education departments, as an integral part of the system of formal schooling, should be constantly asking themselves what their new role in the emerging system is and can be in stimulating and diffusing innovation within that system. It is in this active capacity that state education departments can relate most effectively to the laboratories.

There is already developing a discouraging tendency to define participation of state education departments in the presently established labs solely in terms of formal but meaningless membership on some sort of laboratory governing board. This is a fine gesture but far less than the anticipated role for state departments. Nor is it enough for state educational departments to dip their toes in to test the water by simply undertaking one or two research projects through some administrative division located in a tidy little box on the organization chart. If state education departments would be truly concerned with organizing to provide quality education for all children, they must undergo the same agonizing renewal now shaking the schools. They must become vitally and totally involved in the process of creating and diffusing innovation, and even more important, they must define and understand their new role in that process.

Title V of the Elementary and Secondary Education Act of 1965 anticipated this expanded role of state education departments in the process of innovation by providing them with funds to improve state leadership in education. The March 1966 report of the Advisory Council, created to review and make recommendations on the administration of this Title, recognized how far-reaching even this modest measure is:

> Ideally, the state education department should provide the overall leadership and coordination needed to develop and implement state-wide plans to attain universality and excellence in education. For most state education departments, however, this represents an essentially modern--if not new--role, one that few are adequately equipped to perform. Indeed, there are wide variations in both quantity and quality of leadership services now provided by state education departments among the several states and among the several professional areas of service within the States.[15]

The report also held that "...each state education agency is in a strategic position to shape the immediate and long-term development of education within its state" and described this position as crucial to the achievement of the educational goals of the nation.[16] However, the report noted that in 1962:

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[15] "Improving State Leadership in Education," in Annual Report of the Advisory Council on State Departments of Education. (Washington, D. C.: Office of Education, U. S. Department of Health, Education and Welfare, 1966), p. 1.

[16] Ibid., p. 5.

> ...few if any state departments of education were adequately staffed to provide leadership services to local school systems. The number of state education professional employees in that year ranged from 16 to 271. Twenty-one states employed fewer than 50 professional staff members. Indeed, personnel shortages were so acute that most departments could not fully perform the administrative duties expressly delegated to them by the agencies they served. Consequently, at the time of greatest need, state education agencies were least prepared to give the kind of state-wide leadership required for educational improvement.[17]

Based on this evidence, one of the five recommendations of the Advisory Council was:

> That continued emphasis is fiscal year 1967 be given to those proposals from the State education agencies that show promise of increasing their administrative capacities in appropriate ways, particularly with respect to the agencies' participation in state-wide research, evaluation and planning.[18]

The initial response of the states to Title V has been promising. For example, approximately 91 percent of the first proposals submitted under the Title included plans to strengthen their capacity for planning and developing new educational programs, for evaluating existing programs, and for coordinating research activities.

Summing up these various points I would propose that the key issue to be faced by the states, whether through the provisions of Title V, as part of a laboratory or other association, or even if they elect to go it alone, is how they can retain their individuality as state department of education, and still be a partner in educational innovation. That is to say, the major question I see ahead is not how state departments fit into the organizational structure but rather the persisting question of whether state departments as presently conceived can fit into such organizations. It is no secret that an innovation often suggested is to abolish state departments of education. There are several important areas to examine, however briefly, before we propose an answer to both the question and the suggestion.

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[17] *Ibid.*, p. 8.

[18] *Ibid.*, p. 5.

Preparation, Certification And Continuing Education of Teachers

Despite the claims of obsolescence by some of the more militant computer education types, teachers remain the principal point of contact between education and its clientele. The role of the teacher in any innovative program which involves the classroom is an obvious one. But teachers must be educated and prepared, some means of examining their readiness to teach installed, and some mechanism must be established to insure that they are kept abreast of developments in the field. Each of these is an important responsibility of state departments but there is a fourth concern which permeates all of the continuing role of state departments in relation to teachers: How to insure that teachers are agents for innovation rather than barriers.

States vary considerably in the degree of their involvement in recognizing and pursuing this activity but a number of state departments are pushing ahead in this important area. Evidence of this fact are some of the recent "special projects" funded under section 505 of Title V of the Elementary and Secondary Education Act. Of the first twenty-three projects funded under this section, three of them deal with innovations in the area of teaching. These projects are:

(1) State-wide teacher education programs administered by Maryland with the following states participating: Florida; Michigan; South Carolina; Utah; Washington; and West Virginia.

(2) Interstate certification of teachers and other personnel administered by New York

State with all fifty states participating.

(3) A Conference on the role of the state education agency in teacher preparation and certification administered by Washington State with all fifty states participating.

Other important issues remain unresolved. How meaningful are present requirements for certification? How effectively are they implemented by colleges of education? What happens to good teachers once they enter the formal structure of the schools? Do they spend much of their time attending to clerical tasks or watching the playground? Are they provided with outlets for their creativity? Are there means by which a good teacher can advance as a result of his or her abilities regardless of experience?

The responsibility for producing and retaining teachers receptive to innovation is, of course, a responsibility shared among state education departments, local schools and colleges and universities. In no other area does the laboratory system hold such promise for it has within it the mechanism for coordination of the efforts of groups with such shared responsibilities.

The Preparation, Certification And Continuing Education of Administrators

Administrators are ultimately responsible for the implementation of any decision to adopt an innovation and are often responsible for the decision itself. Key figures in the process of diffusing innovations, no innovative program has a chance for success unless it has administrative support. State departments have a new opportunity to look at their role of keeping administrators receptive to innovation in the process of finding their place in the new organizational structure.

There are two levels on which states might operate in this process of self-examination. The first involves the problem of the mechanics of that mystic process called "certification." The second goes to the heart of the theory on which the training of administrators is based.

Given the complexities of the present system of certification, the problem is how to make the mechanics of the system least baffling and forbidding to potential administrators. There is little question that we have lost some promising administrators, not necessarily because of certification requirements, but because of the endless red tape and kafka-like nature of the whole process. For example, I know of one elementary school principal who was told by her university three years after she had taken several courses (at the suggestion of her advisor) in fulfillment of her certification requirements, that the courses could not be applied toward certification and that she would have to start over from scratch. Her reaction was that if taking more courses would make her a better principal, she would be happy to take them. But she knew they wouldn't and, being a persistent female and unwilling to bow meekly to "the system," she drove the 200 miles necessary to speak to the state certification officer. His response was that, by all means, the courses she had taken could be applied toward certification requirements and he couldn't understand where the university had gotten the idea that the courses were not applicable.

A less persistent individual may well have become so discouraged with the whole process that they would have left education for government, industry or some other field. The university is not always the villain, in fact, one suspects that the state certification officer in this case probably got out a memo to the universities the next day correcting an earlier one. The important point here though is that the certification mechanism should be straightforward, consistent and personalized in the university and at the state level. Periodic reviews and alternative programs should all be carefully examined.

In the long run, of course, the whole process should be examined quite carefully. What exactly is the role of a school principal or superintendent? What kinds of training and experience are necessary in performing this role--is teaching experience really necessary? How meaningful are present certification requirements in light of this newly examined role? What kinds of support personnel should be provided to relieve the principal or superintendent of many of the routine tasks which they now perform? The laboratory offers an excellent arena in which to test some notions without disrupting the on-going school program.

The role of the state department in certification, however, is at best a negative one despite some of the creative possibilities which exist. Where the state department has its greatest leverage is in helping to shape the programs for preparing administrators and in seeing that they continue to be active learners throughout their careers. One way to do this, of course, is to continue to guard jealously the entrance into the ranks of certified administrators by imposing even stricter requirements. There is, however, a more positive and promising means. Most universities are presently in the throes of trying to revitalize their programs in educational administration to meet the vastly changed role of the school administrator. The problem, of course, is that no one really knows yet how to train administrators for today's social world, let alone tomorrow's unknowns. There are some promising new programs, some flirtations with the behavioral sciences and even some awareness that lectures and lessons on what was will not suffice for what is or what will be. What is obvious is that we must spend some time experimenting with a variety of new techniques in preparing administrators. Many questions remain to be answered. Is in-depth preparation in one behavioral science more valuable than exposure to a variety of disciplines? How valuable is internship experience in schools? What patterns of post-doctoral training would be most valuable? These and an impressive array of similar questions share two features; they must be asked and answered, and awaiting experience through normal channels would take far too long. Setting aside the possibilities of simulation techniques, the one possible means is through the new organizational structures such as the laboratories. Here, in a microcosm of the real world of the schools, it would be possible to experiment and to feed results back into the system on a fairly current basis. State departments, however, must be willing to use the information and to be just as responsive to change in certification requirements.

The same arguments that surround the question of federal control are operative here. One could argue that local autonomy is so important that all state expenditures should be for general purposes, leaving the decision of how to spend the funds up to the local power structure. There are those, however, who might argue in reply that the local power structure does not comprehend adequately or reflect local opinion and needs. But as in the case of federal expenditures for education, there is the more basic economic argument that once the state collects taxes to pay for education in the state, decisions must be made about how to reallocate the tax income. Even the simple decision merely to return to local districts the sums collected in their jurisdiction in taxes for education, is an implicit decision that local districts should spend more on education than allocated through the local machinery. Or if the decision is made to reallocate among districts, we might ask what rich community would voluntarily decide on its own local accord to reallocate some of its resources to education in poorer communities. There is just as much sense in creative financing on the state level as on the federal level.

Thus, once the state has collected taxes, part of which are used to support education within the state, it becomes the responsibility of the state to spend the funds in the most efficient manner in keeping with its educational goals. If the facilitation of educational change is an important goal, then states should have some idea which types of expenditures operate most efficiently to facilitate educational change.

While there are far more questions than answers in this area, previous research and pure reason suggest that special purpose stimulation grants can be used to encourage some districts to adopt an innovation which has been tested (through the labs, for example) but which has not yet been adopted on a wide scale. The innovation is then adopted by other districts as the multiplier effect takes over, operating through the notorious tendency of school superintendents to turn to their peers to find out "what's new?" The adoption of the types of programs initiated by the National Defense Education Act was the result of this kind of approach.

Diffusion activities tailored for specific audiences represent another type of program deserving of state expenditures earmarked for facilitating educational change. Demonstrations, bulletins, and conferences aimed at opinion leaders are the most obvious examples of such activities. The success of such activities presupposes a great deal more than we know presently about the process of identifying and influencing opinion leadership but it is nevertheless an area worth pursuing. One of the most immediate tasks of the laboratories, however, should be to develop and test new diffusion models for this type of activity, and to make the results available to state education departments.

State-Wide Curriculum Requirements

One final area among the many we could discuss is the role of the state department in setting curriculum requirements for the schools.

Let us start with the assumption that state departments, like the federal government, are potentially in a better position than local schools or individual teachers to assess current curriculum materials. Let us further assume, however, that schools, administrators and teachers have a much better grasp of what they need in the area of curriculum than we have ever given them credit for in the past. Thus the problem here is essentially one of putting people who know their needs in touch with other people who know the best way of satisfying these needs. The age old problem here, as in the growing concern for federal control of the curriculum, is how to balance informed concern and innovation against the imposing of curriculum from above, and the resultant crushing of individual initiative and creativity on the part of the schools and teachers. We have spent endless time and energy exhorting teachers and administrators to be creative and innovative. We have spent even more time and energy making certain that they have neither the time nor the opportunity to do so. The new structural organizations for educational change in general, and the laboratories in particular, present a new hope for a meeting ground between state concern and local initiative in this area. We have learned in our experience with the curriculum revision programs that unless teachers and administrators are an integral part of the planning of curriculum change and development, it is less than sensible to expect that they will be in either the mood or the position to implement such changes. The laboratory serves as a creative if neutral locus where state departments, the local school systems, and university scholars can examine curriculum needs and develop programs which are at once responsive to local needs and to the wider experience and purview of the state department.

Conclusion

What I have attempted to suggest in this paper is that the new structural organizations for educational change present to the state department an opportunity as well as a challenge. The state department has the enviable role of serving as the link between the existing educational system with its operational responsibilities, and the innovative system which must be the nature of these new organizations. This is not to suggest a schizophrenic state department, but rather that education has always been characterized by the dual role of transmission of the traditional cultural heritage and responsibility for the implementation of change. The state department must assume as its principal responsibility the implementation of educational change within the existing structure of the schools. If education is to survive the massive changes which are predicted for it in the coming decade, the state department must take an active role in organizing for change. This is not a question of alternatives or other possible solutions. Neither are there any questions of leadership vs. followers roles. Educational change is now the order of the day. It will require all of the talents as well as the resources of state departments of education to fit themselves into this new order.

CHAPTER IX

EMERGENT FUNCTIONS AND OPERATIONS OF STATE EDUCATION DEPARTMENTS

Ewald B. Nyquist*

Nyquist summarizes many of the problems facing state education departments. He outlines the role of state education departments, and their relationships with the federal government within the field of forces shaping American Education.

The author discusses the emergent; functions, internal organization, and administration in state education departments. In addition, Nyquist describes the changing interrelationships of the states with the federal government, and he indicates ways in which states and the federal government can or do cooperate.

Introduction

It will be the basic premise of this paper that if state education departments are to count as seminal leadership forces in shaping education in the last third of the twentieth century, they had better become constructively abrasive agents of change and talented engineers of consent. The alternate to joining these new peer groups in American education now engaged in the management of innovation and in bringing about a favorable ecology for experimentation and research, is second-ratedness. And we need to remind ourselves that second-ratedness is the lot of those who never are the first to do anything or never do anything as well as it can be done.

Part I Basic Assumptions

It is the responsibility of any state to ensure:

1. That the young people of the state are

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provided with opportunities for the highest possible quality of education;

2. That these opportunities are made equally available to every individual wherever he may live in the state and without regard to creed, color, handicap, or economic circumstances,

3. And that the resources of the state allocated to the attainment of these goals are used with the utmost efficiency and economy.

Some other assumptions, beliefs, or premises are in order:

1. As Robert C. Weaver, Secretary of Housing and Urban Development, has said, the key characteristics of the nation at this point in time are: It is urban; it is affluent; it is relentlessly innovative. And he might have added that it is also technological.

2. Education is no longer regarded as a cultural nicety, but as indispensable to the fulfillment of the individual and the advancement of the social welfare. Education is what makes progress possible. It has moved up in the nation's ladder of priorities.

3. Democracy, as Toynbee has said, stands for giving an equal opportunity to individuals for developing their unequal capacities. And this does not mean the same experience or opportunities for everyone but rather those experiences and opportunities which are equal to people's abilities and interests.

4. The price of educational excellence is an investment and not a cost. Economic productivity is heavily dependent on investment in education. So substantial is the new education growth industry that any significant change in the spending pattern for education will have a powerful and pervasive impact on the economy of a state or the nation. Similarly, the educational community has become so large and important that its membership is a new social and political force.

5. In a day of breathless change and faith in flux, when only the stable and unchanging are unreal (and tradition has been defined as something you did last year and would like to do again) we must educate for adaptability and versatility, for we must learn to live in a state of perpetual surprise, with our eyebrows permanently lifted.

6. Education no longer stops at graduation time. We are in a time when everyone must be learning from pre-kindergarten to postgraduate

(or from "two to toothless"), if not for employment at least for his own happiness and usefulness. There will be no productive roles in the future for the half-educated. As the President's Panel of Consultants on Vocational Education has stated:

> Education must be a continuous process--not simply a vaccination given to make the individual thereafter immune to ignorance or need for change.

7. In the modern era, education is everyone's business, not just the private preserve of the professional educator. Education is too important to be left solely to educators.

In short, as a report of the Educational Testing Service recently put it:

> American majority opinion seems to be fairly well convinced that:
> --education is important; it is the principal determinant of individual and social progress;
> --education should be dynamic; it should incorporate, as does the society of which it is a part, the rapid developments of our time in scholarship and technology;
> --education should be democratic; it should be available to all, early and continuously, and it should provide for individual differences and individual development.

Part II Trends and Forces Shaping State Educational Leadership

Besides the foregoing assumptions, there are forces, modes of operation, and critical areas of weakness which affect (or should) the functions and operations of State education departments. They compel revision in priorities and adjustment in traditional attitudes of conducting the business of educational government. A brief inventory follows:

1. Interlocking complexity. Just as we live in a culture which is polarized around the scientific revolution, so do we live in one which puts a premiun on organization, on system, on cooperation between units having mutual or overlapping

interests. It is a day of calculated interdependence, of involvement, of planned togetherness, whether we like it or not. Not enough educators realize that they can no longer preside over institutions or agencies in splendid isolation, for, up to now at least, education has been a many-splintered thing. The day of the "fortress school" is over. Few are prepared by education, experience, or inclination to cope with the often bewildering interlocking complexity of their environment.

Traditional forms of institutional autonomy are being displaced by emerging patterns which emphasize interdependence rather than independence in the expansion and improvement of education. It is not only a problem of cooperation or sharing of responsibility between like institutions. State education departments and local school officials must learn to establish constructive relationships with the Federal government, with private and parochial educational institutions, with private and public agencies in such fields as health, welfare, housing, recreation, and community planning, with business and industry, labor, the poor themselves, and with the other educational resources which have hitherto stood on the periphery of the formal teaching and learning process, such as museums, libraries, educational television, zoos, the performing arts, etc..

These days, then, educators must learn that it takes at least two to tango. The new era is one of "going steady." Educators no longer walk alone. There is, as someone has predicted, a bright future for complexity; and he might have added, ambiguity, for assisting in filling out the educational mosaic of the Great Society is not without both. We may need to develop a new art of group dynamics.

2. The National Interest and Creative Federalism. The most significant development in American education is the increased awareness of education's importance to the achievement of our national goals. Education has a first priority. One result is the emergence of the federal government in a clearly strengthened role in financing education and of a national commitment to raising the quality of our educational enterprise.

The availability of massive categorical federal aid to correct areas of critical weakness forces new relationships. Indicative these days of the concern with the meaning of the Federal Government's growing participation in education, is the preoccupation with the term, "creative federalism." It conceives of a partnership, a family of governments, a federal-state-local sharing of responsibility, joint effort, and mutual development of new activities, rather than a strict separation of powers and direct federal action. It acknowledges the importance of state and local levels of governance with their accompanying powers and responsibilities, but affirms the primacy of the federal government. The concept presumes to be more sensitive to the "rapidly changing pressures and powers in an increasingly pluralistic society." Power and control in education are not a fixed absolute pool, a static commodity, a defined quantum of power. The entrance of the federal government into education does not diminish the power of the states or localities; it enlarges it.

The new notion of federalism, then, calls for a sharing of responsibility for carrying out an important public purpose which all have in common and which none could achieve as well without the cooperation of the others. It is mutually enriching and has a multiplier effect on its participants. It depends upon cooperation,creative tension, conflict, and constructive criticism for its continued viability.

3. Accountability. Accompanying the mounting financial support of education from all sectors of civil government, has been a predictable heightened interest in the increased educational effectiveness and quality which the new monies are supposed to produce. The editor of the English journal, Nature Magazine, in a recent issue opened an editorial with the remark that if you give a dog a good name, you have more hope of sanctifying him. Some educators may prefer to call the process of measuring educational effectiveness, "evaluation." Others, to sharpen the issues, choose to label it "providing accountability" on the basis that educators have a rendezvous with debt.

There are two aspects to accountability in education: Have the funds been spent for the purposes intended, and, what effective use has been made of them? These are the two fiscal and educational aspects. No one can protest that one should be held fiscally accountable for money received and spent. But educators, because they deal with a largely intangible product, are not quite as used as others are, to providing a full reckoning for funds received. Education is too often thought of as being in a class with the American flag, baseball, libraries, and motherhood--they have a sanctity which should go unexamined.

States and local schools, public or private, should be put on notice: One sure way, from now on, to incite a mutiny of the bountiful is for educational administrators not to try as hard as they can to tease out all the objective evidence they can that program goals are being met--that public funds are being spent wisely. With the rise in local, state, and federal financing of education, the question looming in the minds of civil executives and legislative representatives at all levels is this: Since they are willing to provide the funds for building quality in education, what real evidence can we provide them that the educational system is doing the job expected of it?

Providing a heightened educational accountability to the public for our educational stewardship will require new attitudes, new techniques, imagineering, a willingness to experiment with boldness. Evaluation has become a major challenge to the profession. Those whose business is lawmaking and tax-levying want good evidence to support new laws and more taxes for education.

4. The disadvantaged. It is well within the conventional wisdom that there is a growing concern for children who are hampered by reduced opportunities for upward mobility and, therefore, social and economic success, caused by poverty, prejudice, and geographical isolation (not all the disadvantaged are in the cities; there are some in sparsely settled areas). We desperately need to put the poor and the prejudiced on an equal footing in educational opportunity with those who are more familiar with abundance and advantage. They are the hardest and the costliest to educate, but as Professor Cremin of Columbia has said, a universal system of education is ultimately tested at its margins.

5. Urban education. A fifth factor affecting educational leadership is the need to address ourselves to the problems of urban education. This is where the largest number of our people are and where the action is. State education departments, like state legislatures, have traditionally been rurally oriented. Reform is long overdue.

The recent history of urban education has been one of a vicious circle of ever diminishing support and deterioration in quality. There are five barriers to improvement in urban education:

a. The limiting geographical confines of single school districts. Can better solutions be found in the notion of metropolitan as against city government and by cooperation between urban and suburban areas?
b. Inadequate financing.
c. Apathy of the power group in large cities toward urban educational problems.
d. Existence of de facto segregation.
e. The unmanageable size of large city school systems.

In many states, Big City Superintendents usually shun association with their state education departments.

Big City school systems need all the help they can get, even from state education departments.

6. Racial integration. This leads one to emphasize as a sixth factor which is coming to shape leadership in education, the existence of de facto segregation and the need for quality integrated education.

There are two aspects to the Civil Rights movement as it affects education: Desegregation, which is basically an administrative problem, and integration which is an educational one. Desegregation, once decided upon, is largely a mechanical matter to carry out, despite the emotions and tensions aroused in doing so. But, integration is something different--it involves both the head and the heart.

What then is integrated education?

It is an education in which the child learns that he lives in a multi-racial society in a multi-racial world, a world which is largely non-white, non-democratic, and non-Christian, a world in which no race can choose to live apart or be quarantined and isolated from the rest. It is one that teaches him to judge individuals for what they are rather than by which group they beong to. From this viewpoint, he learns that differences among peoples are not as great as similarities and that difference is a source of richness and value rather than a thing to be feared and denied. And these things can be taught anywhere.

Equality is the moral imperative of our era. Giving practical effect to it in education, the author believes, has the first priority. The Civil Rights movement will some day be viewed as one of the major forces causing significant change and improvement in the general quality of education.

7. Innovation. Another major factor influencing leadership today is the new concern to improve the quality of education through innovation and experimentation. Fresh breezes are blowing through our school systems and collegiate corridors--or should be.

Innovation is rapidly coming about in five major areas:

a. in education theory, which suggests that learning is most effective when the student is discovering for himself, principles, generalizations, basic ideas, and the fundamental structures of the various disciplines;
b. in the education of teachers;
c. in educational arrangements, in the mechanics of running the schools, such as nongraded schools, team teaching, changes in building design, programmed instruction, etc.;
d. in special education for the disadvantaged, including pre-school education;
e. in using more directly in the teavhing and learning process, the educational resources, such as museums, television, libraries, the performing arts, which have hitherto stood on the edge of formal education.

8. Educational efficiency. Because the costs of education continue to rise to substantial levels of support, acutely taxing local and state resources,

there is an intensified concern for improving the efficiency and economy of the educational system at all levels in order to ensure the most prudent use of every tax dollar for educational pruposes.

9. Universal higher education and vocational education. While they are separable in other ways for the purposes of this paper, these two factors influencing change in state education departments, are dealt with together for they are integrally allied.

Every prophet of the commonplace has remarked on the rising trend toward universal higher education. No one dare challenge the proposition that at least two years of college education will soon be a common experience for a majority of high school graduates and at least some post-secondary education for perhaps three-quarters. We shall thus witness, as Frank H. Bowles recently predicted, that schooling for everyone from three to twenty will be a general pattern by 1980 (and probably sooner).

While many forces influence the rising personal aspirations of greater numbers to acquire more education, one certainly is the increased sophistication required to make a technological society work. Manpower requirements in both number and qualifications continue to rise.

The trend toward universal higher education, radical shift in manpower needs, the national attempt to break the poverty cycle, and the rapid obsolescence of occupational skills are bringing about a reexamination of vocational education.

One generally accepted goal of education is to enable the individual to enter the economy at a level close to his capacity. If we are to approximate this goal, the glaring deficiencies of vocational education, which has been operating within an educational framework now a half-century old, will need radical remedy.

What are some of the deficiencies?

a. The opportunities for students to receive vocational education are not evenly distributed throughout many states.

b. Much of the equipment used in vocational education is obsolete.

c. Vocational programs too often are rigid rather than flexible, preparing students for specific jobs which become quickly eliminated in a day of rapid change, instead of educating students for clusters of jobs and for adaptability and versatility.

d. There is considerable confusion as to what portion of the vocational education task should be done by secondary schools and what function should be performed by the community college.

e. There is a disconnection between job opportunities in the world of work and the educational system. And the split is equally obvious within the educational system. Academic subject teachers do not work fully hand-in-hand with vocational education instructors and vice versa. Indeed, school organization and the provisions for state governance of vocational education often foster this disjunction (not to mention the hegemony of the U. S. Office of Education in a previous dispensation).

f. There has been insufficient sound, cooperative planning involving local or regional needs in vocational education, bringing together all related elements having a stake in improving such education.

10. Employer-Employee relationships. Another factor calling for creative leadership in the administration of education is the growing issue of unionism among teachers (and not only at the elementary and secondary levels); the more militant nature of their traditional professional associations; and the mounting competition between unions and professional associations for their affections. This complex force for change will eventually be viewed as the most significant influence, next to the Civil Rights movement, in shaping educational leadership and the quality and opportunity of education.

The conditions of employment for teachers, including working arrangements, salaries, collateral prerequisites, and their role in the development of educational policy, call for local reform and administrative astuteness, and new state responsibilities and services to the local schools. Moreover, non-instructional employees are rapidly becoming organized as well. Disenchanted, unionised school bus drivers can probably close schools faster than alienated teachers.

11. Private institutions and church vs. state. There is evident today an increasing community of interests and of purpose in public and private institutions at all levels, and cooperation among them is growing. This is commendable. In a day when public education is expanding faster than education under private auspices, and when it is essential that a mixed economy of both public and private education be maintained as a part of our public wealth, an increasingly pressing question is how the state can assist and use private institutions in carrying out the states obligations.

Cooperative arrangements between public and non-public schools, such as shared services or dual enrollment, have been developing in recent years at the local school district level. One is not aware that at the state level there has been a corresponding recognition of the need for lateral outreach, for policy development, planning and control, which would suggest that state education departments feel a major responsibility for the quality of the education provided non-public school children.

The ecumenical movement generated by Pope John, rising costs of private education, and the enactment of important federal legislation have confronted the states with a major question: To what extent should they feel obligated (a) to foster relationships between public and non-public schools quite aside from those which occur, sometimes all too mechanically, as a result of carrying out mandated federal legislation; and (b) to provide services and maintain standards for the non-public schools? Too many state education departments and local school districts have abdicated their historic responsibility for ascertaining the quality of education in the non-public schools, for seeking legitimate state means to improve it, for finding ways to involve non-public school authorities in the mainstream of any state's educational activities, and to make them an integral part of the educational community.

The real dilemma is: How can state education departments see to it that every child in the state, no matter where he is enrolled, receives a quality education at the same time as important constitutional barriers prohibiting the aiding of religions, are not breached? On the one hand, there is the historical doctrine of religious freedom and the proscription against aid to sectarian establishments. On the other, is the state and national concern for providing equal educational opportunity for every child.

Congress and the Administration have not shown an inclination for direct confrontation with this dilemma. This issue has been largely by-passed by the federal government in recent years. The result has been that the issue has been downshifted to the state and local levels for differential treatment and accommodation. While there is desperate need for more landmark court decisions in order to define more precisely the permissive limits of cooperative arrangements and public aid, state education departments cannot wait for such guidance. State education departments are going to find themselves increasingly obligated to carry on a continuing colloquy with the non-public schools. They should be aggressive in finding ways to provide services and standards and to perform coordinating functions for them.

12. International education. In a day when nations sit on each other's doorsteps, when the dividing line can no longer be finely drawn between domestic concerns and international affairs, state leadership will be increasingly required to assist in developing better international understanding. The International Education Act and federal administrative programs to foster international understanding are going to have an immediate impact at the local and state levels. The states can no longer afford their provincialism; neither can the nation.

13. Automation. One of the dominant trends affecting the educational system, its responsibilities and burdens, is the rapid growth of automated devices. The pace of growth of automation is accelerating at a bedazzling rate, far faster than the ability of educational systems, social institutions, and occupational groups to cope with it. We desperately need educational leaders with the power and insights to foresee the consequences, to plan ahead, to educate for adaptability, to create the best new opportunities for the use of leisure time.

State education department leadership is required to ensure the systematic and economical development and use of electronic data processing in the schools, for one thing. Some schools, unaided and unguided, are finding out, ruefully, that IBM can stand for, "It's Better Manually"

Secondly, some prophets are predicting the eventual widespread use of computer-assisted instruction, for regular classroom use as well as for inservice education of teachers. A wise education department is one which stands ready to foster and assist in the development of such innovations.

14. The cultural revolution. One of the main trends in our society is what only can be described as a cultural revolution. In part it is the result of a waning provincialism which has until recent times characterized American society. In turn, the decline of provincialism (which is defined as "blindness and insensitivity to all beyond a narrow purview") is due not only to greater affluence but also to the great postwar population growth and its impact on education. Competition for admission forces some students to matriculate in colleges in distant parts of the country. Conversely, colleges seek to diversify the geographical origins of their students. The increased need for better international understanding, greater mobility, and swifter communication and transportation, have also done their share in creating this cultural explosion.

It is probable, too, that the cultural explosion is in part a redressing of the value imbalances caused by a technological society which emphasizes economy, efficiency, power, production, organization, and system, and whose residual effects are the pressures of competition and the lack of meaningful human contact.

Glen Seaborg has remarked that:

> What we need today are ways to support the humanities and the arts so that they can have the economic freedom to reflect some of the truths that a nation needs to have revealed to itself. This way we can maintain and develop the values that we so crucially need if we are to continue to develop as a technological society and as a human society as well.

State education departments will find themselves increasingly importuned to emphasize the humanities in curriculum development and to foster relationships with professional performing arts groups in order to ensure integration with the regular offerings of the schools and the more traditional department curricular and instructional services.

. . . .

A few other developments and issues should be mentioned which will influence state education departments and their readiness to join with others in facing them.

15. The new advances in science and technology, particularly as they affect education, are such as to warrant specialized attention at the highest levels of leadership. Especially in biology and in chemistry and where the interfaces of these two subjects border on each other, are there developments having new significance for education, not simply in instructional technology or curriculum development, but for the teaching and learning process itself. It may very well be that all educators will one day have to know their acids from their bases.

16. Environmental control, meaning water and air pollution, conservation, etc., has implications for curriculum development and interrelationships with other state agencies.

17. Sociological health problems, such as those caused by alcohol, drugs, and venereal disease, are affecting the curriculums and state education department relationships. The topic of sex education has suddenly blossomed, even in quarters which once counselled only repression. Our tradition of Puritan restraint and timidity is dead (or at least moribund). Motherhood no longer has a sanctity which can go unexamined.

18. The increasing importance of research and validated experience in education is an insight universally gained only in recent years, and it is one which has the weight of federal interest behind it.

Part III
The Role of State Education Departments

James Thurber, a favorite humorist, was once asked by a friend, "How's your wife?" to which Thurber replied, "Compared to what?"

What about state education departments? How good are they to assist in giving practical effect to the new mandates in education?

As the federal interest in education has increased and as local school systems have controted problems beyond their capacity to cope with effectively, the need for reevaluation and readjustment of the role of the state education department has grown. No event better illustrates this need than the shift in position by James B. Conant. At the 1964 annual conference of the Council of Chief State School Officers, he indicated that as late as five years ago he would have advocated that local boards of education were the keystone to educational policy and that state departments of education were just to be "tolerated." "Now," he said, "I have changed my mind." In his book, Shaping Educational Policy, he wrote,

> What is needed are strong state boards of education, a first-class chief state school officer, a well-organized state staff, and good support from the Legislature.

The reason for this need rests on more than the superficial fact that the state is in the middle between the local level of administration and the federal government.

The state provides a broader base for educational leadership and planning than is possible at the local level, yet one which is far closer to the local school or to the local college than the federal government. It makes possible a continuity of leadership and breadth of perspective directly responsive to regional variations, conditions, and needs. The state is uniquely equipped to formulate policies, conduct research, encourage experimentation, make decisions and take action on a scale not so limited as to be fragmentary, transient, and localized; nor so vast as to be remote, impersonal, and conducive to the development of a bland and monolithic conformity.

Many states, however, are still poorly equipped to perform effectively the vital role which they must assume in education. Few states, for example, have a state board with the prestige, the caliber of lay members, or the broad authority, overall, of education that their responsibilities call for. Some state education departments are poorly staffed, too highly bureaucratized, and politically dominated.

Some are characterized by intellectual incest: All personnel, in training and experience, seem to have come from the state's own educational system. Their qualifications show little outbreeding with business and industry, subject matter disciplines, and diversified provenance.

Budgets are usually inadequate, and restrictions in expenditure make even available funds difficult to use effectively. The conditions of employment, personnel policies, salary schedules, and travel regulations, often geared to state agencies not having comparable professional responsibilities, make hard and frustrating the recruitment and retention of qualified personnel. In the face of these conditions, state education departments have been flooded with new administrative responsibilities for federal programs. They find themselves with more money than talent.

Internally, some state education departments are plagued by antiquated structure and organization; others operate without benefit of fully developed research and data systems or without adequate provisions for statewide study, evaluation, and planning; most lack appropriately prepared and experienced personnel in numbers sufficient to achieve and sustain desired levels of leadership and service. And without all of these, of course, there can be no vision, no ability to point to a better way or to help others see what is possible, no capacity to raise local levels of educational expectations.

Too many departments, like state legislatures, are rurally oriented and lack the stature, inclination, and competence to deal with urban education, the intense, concentrated problems of large cities: High costs, racial imbalance, organized and militant teacher groups, the disadvantaged. And too few departments have any function in higher education, which lack makes more taxing the administration of certain federal acts (Vocational Education Act, for one) and the fostering of cooperation between different components of the educational system.

One of the administrative problems plaguing the U.S. Office of Education, is the great range in competence of the several state education departments to provide the kind of innovative and creative leadership required today. After all, 50 percent of them are below average.

And while that may be a fecetious remark, let us remind ourselves that in a recent opinion poll survey in which public junior high school teachers in six midwestern states were asked if their state education departments were providing leadership in improving the local public schools, only 46 percent of them answered "yes" and 54 percent either said "no" or were undecided.

Are there too many departments over their heads in giant problems of national importance and up to their knees in administrative midgets? Diversity, of course, is always necessary, but diversity should not mean general weakness or rich variety in poor quality. Recognizing the need for state education departments to be stronger if they are to play the central role, they themselves expect tc play and expected of them by others, the federal government has provided funds in Title V of the Elementary and Secondary Education Act to strengthen the leadership capacity of state education departments. Here is a fine opportunity to make ourselves as strong in practice as we know we are in theory.

Unless states are strong in their educational leadership, they can expect to witness a decline in state-local relationships and a proportionate growth in direct-line communication and administration between local agencies (especially the large cities) and the federal government. The question at this point of time hangs delicately in the balance. The growth of the federal government's influence in education, meaning its direction and control, will only occur to the extent that the states neglect to exercise their responsibilities as well as their rights. One is the obverse side of the other. Educational interests sooner or later turn towards those governmental sources willing to provide support and sound advice and away from those which abandon their powers or fail to exercise them.

It is not suggested that the federal government should be a minor, junior partner in education as some of the major federal spokesmen for education so sweetly and coyly and disarmingly have put it. The state can only maintain a senior partner position if it leads boldly, imaginatively, and creatively.

In the recent words of John Fischer, President of Columbia's Teachers College,

> State departments of education. . . are finding that it is not enough piously to assert that in the American educational system the state is the sovereign authority. The sovereign is now called upon to be also a leader, and to some state officers the call comes as a shock. . .there can be sound and effective federal-state partnership only where the state agency is prepared to meet the federal agency at a comparable level of professional judgment and performance.

An exaggerated emphasis on regulatory and supervisory responsibilities and on following the right procedure instead of seeking the right result, puts a premium on being second-rate. Instead of being inverted micawbers, waiting around for something to turn down, state education departments today must be a moving, creative spirit and an agent of constructive change. Already significant strengthening of the state education department is underway, thanks to the nature of the times, candid self-examination, the sudden discovery of education by the people as of prime importance, and the help of federal funds.

In summary, the role of the federal government is to identify national goals and needs in education; to provide massive infusion of supporting funds; and to evaluate our total effort as a nation.

The role of the states is to provide diversity in leadership; to organize and coordinate an effective educational system; to establish a sound foundation program of financial support; to provide efficient coordination and distribution of funds; to establish minimum standards for achievement and quality controls; to lead in long-range planning; to conduct, cooperate in, and encourage research, to stimulate innovation, to assist localities in evaluating results; to develop good information systems on the facts and conditions of education; and to provide incentive to local school systems to go beyond a minimal performance. In the author's view, local school systems do not have the right to be as bad as they want to be.

The state is the key to securing a proper balance of strengths amongst the local, state, and federal agencies composing what will increasingly become a calculated interdependence in education, a partnership of shared responsibility.

There is, too, a special role which a state must play today: It is to maintain a diversity in local education in the face of pressures fostering growing uniformity and nationalization of the schools. The causes of nationalization and uniformity in the schools come from both private and public sources, all in the name of increasing quality:* Program regulations of the federal government, the requirements of regional cooperation, the national assessment program, textbook publishers, the manufacturers of instructional equipment, the private foundations, and eventually the Interstate Compact. Educators are imitative of each other and practice is iterative in the educational community. Often a limited local educational heresy soon becomes widespread orthodoxy.

State education departments, then, as they move from regulation and being mere distributors of subsidies, must become stimulators of change and maintain dispersed local initiative for innovation in order to combat an opposing tendency toward homogenized conformity.

Part IV. Emergent Functions

Deriving from the forces bringing about change discussed in previous sections as well as from the basic beliefs and assumptions posed in the first part of this paper, are several implications involving new functions, operations, and adaptations which state education departments should consider. There will be some who will argue that none of these is really new or "emergent." This may be so. But present conditions surely give them a new urgency, and there is hardly uniform theory or practice in the several states with respect to many of them.

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* Robert Dentler, Director of the Center for Urban Education in New York City may not have meant it in the same sense but he stated in a recent article: " . . . there are many forces working to eliminate inequalities among schools. The most powerful is the gradual emergence of a national educational system with relatively uniform standards of excellence."

The list is not meant to be exhaustive. All of them, if assumed, promote state leadership in education. All of them are concerned with accelerating change. All of them are based on the premise that in the modern era, a state education department must be an agent of change and that if innovation is to be timely and effective, change must even be institutionalized and professionalized.

There are several primary functions which a state education department aspiring to excellence must be willing to assume. Many departments are performing a few of them, only a handful can be adjudged professionally competent in their exercise. While there may be some who will argue that excellence, by definition, cannot be ubiquitous, one can counter that the full fruition of the concept of creative federalism can only come about if all state education departments make some minimal arrangements for carrying out responsibilities in each of these primary categories. And it should be kept in mind that there are many commendable and diverse ways to give practical effect to these functions. No one state education department has the answer.

Primary functions are:

1. The establishment of educational goals. Seneca once stated that if we do not know to which port we are sailing, no wind is favorable. Comparatively few state education departments have gone through the process of defining broad goals to which state government, the local schools, and citizens can commit themselves in allocating the combined local state-federal resources available for their accomplishment. It is a painful process and one which, if it is to be well done, involves wide participation and consensus.

Broad goals are: providing an adequate supply of well-qualified teachers; providing in each school of the state curriculum materials, activities, and procedures that contribute most directly to developing an individual's ability to think; construction of enough new classrooms to keep pace with increasing enrollment; the encouragement of innovation to achieve more efficient use of materials, facilities, and personnel; reorganizing local districts into units that are administratively and educationally strong and financially efficient; providing adequate opportunities for continuing education for adults in all phases of their lives: work, family, public, and cultural life; etc.

Such a goal statement should recognize the proper role of local direction and control of individual elements of the educational system and the overriding responsibility of the state to ensure quality performance by those individual elements.

Requiring even more effort is the process of defining specific educational objectives to be achieved in the teaching and learning process. A recent book on the preparation of instructional objectives begins with an echo from Charles Dudley Warner's famous remark about the weather: "Everybody talks about defining educational objectives, but almost nobody does anything about it."

Henry S. Dyer of the Educational Testing Service has recently given us the reasons why the goals formulated in the past have been largely non-functional: Too much reliance on the magic of words; too little public participation in formulating the goals; and too great readiness to suppose that the goals are already given and require only to be achieved.

What are the desirable outcomes of the educational process, not only in terms of basic skills but including behavioral outputs as well? Each state must develop its own taxonomy of both cognitive and non-cognitive objectives.

Evaluation procedures cannot be exemplary nor can long-range planning be fully effective without the definition of broad goals and specific educational objectives.

Many chief state school officers and school administrators have viewed with disquiet, if not hostility, the National Assessment of Education Program, encouraged by the federal government and supported by funds from the Carnegie Corporation and the Fund for the Advancement of Education. This pioneer effort to develop a nationwide inventory of educational progress should be welcomed, not resisted. That this commendable beginning to assess nationally the mastery of certain knowledge and skills that thoughtful educators and lay citizens believe are important for children to learn, should suffer from a credibility gap is not only not flattering to the educational community--it is alarming, for it measures how extant in the educational establishment are blind prejudice, ignorance of elementary facts about educational measurement, the vast momentum of ancient custom, and the restraining force of the "dusty dogma" of states' rights.

2. Long-range planning. It is paradoxical that simultaneously as we bear witness to the widespread exponential rate of change, there is growing insistence on long-range planning. The explanation is simple. Many rates of change are predictable. Projections can be made. On the other hand, it is a wise state education department that scrutinizes at least yearly and preferably continuously every aspect of its long-range plan to ensure that it accommodates the unexpected. Simple and stable straight-line relationships in education no longer exist. Education is a complex mix of many shifting and interacting components.

Planning in some state education departments is now a year-round affair, not only to budget for the succeeding year's needs but to make adjustments in long-range plans for unforeseen changes and needs. While it would be highly commendable if all operating heads in a department could be competent to plan in accordance with the new requirements (or could find time for it, even if competent), it is probably realistic for some major officer to be designated as planning officer with the function of coordinating and stimulating the planning of an entire department. One state education department is establishing an Office of Long-Range Planning for the purpose.

There is a growing practice for state governments to engage in program budgeting, which is gaining ground throughout the federal government following the prominent example of the Department of Defense. State education departments reluctant to launch program budgeting will undoubtedly find soon enough that the initiation of program budgeting procedures by the U.S. Bureau of the Budget will be certain to be reflected in future federal criteria governing state and local applications for federal assistance in many program areas. States would do well to work closely with federal officials in order to ensure that state and federal programming systems are complementary and mutually supporting.

Program budgeting involves detailed planning for every area of a department's responsibilities: planning in written form so that it can be discussed and reviewed by all concerned; planning in time perspective so that the future can be projected step by step; and planning in such form as to make visible the accomplishments of the department in relation to its expenditure of resources.

A recent writer on the subject states that program budgeting enables one to ask such questions as:

> What does this program attempt to do?
>
> What does it do it with and with what results?
>
> How much does it really cost? This year? Over five years? Over ten years?
>
> What could it do with fewer resources? With more resources?
>
> What other function might it take on or give up? Should it be continued and at what level of support?

A planning-programming budgeting system is designed to give a department head the information he needs for decision-making. It forces the periodic identification and assessment of needs and opportunities for educational programs, materials, and methods in a state and the definition of the human and physical resources necessary to carry them out.

No one should underestimate the difficulties and rigorous discipline required in developing a program budget for education. But it is indicative of the increased accountability being asked of educators for stewardship of an important growth industry that they are increasingly subjecting themselves to the process (or are being compelled to do so).

Both the establishment of goals and long-range planning are, of course, highly interrelated. They force the designation of priorities--the relative urgency of various problems and issues--and the consequent allocation of resources to resolve them. If intelligence can be defined as anticipatory behavior, then long-range planning is a hallmark of excellence in state educational leadership. Robert Bridges once remarked, too, that "wisdom lies in masterful administration of the unforeseen."

3. Guidance and coordination. A strong state education department should carry on a number of activities designed to guide educational activities in specific directions in line with broad goals and educational objectives.

Examples are:

- .the development of master or statewide plans for school district organization
- .the development of regional and statewide plans for improving and expanding vocational education and coordinating it with higher education
- .the development of a statewide plan for organizing supplementary educational centers and services, under Title III of the Elementary and Secondary Education Act of 1965, on a regional basis
- .encouraging locally and collegiate sponsored inservice training programs for teachers and administrators with state aid incentives
- .encouraging the development of foreign area studies in local curriculums with state assistance
- .developing and promulgating curriculum and teaching guides in a number of subject matter areas,including vocational education, the basic disciplines, the humanities, advanced placement subjects, health education, etc.
- .preparing a master plan for the establishment of community colleges (if departments have this function in higher education)

.encouraging local research, experimentation, and innovation through the establishment of categorical state aid programs for these specific purposes

.encouraging local school districts with state aid to correct critical areas of weakness such as the quality and opportunity of education for the disadvantaged; the identification of talent in depressed groups; the dropout problem; the education of children of migrant laborers

.encouraging students to go on to advanced education through a state-aided scholarship program

.the development of state plans for the administration of federally aided programs, such as Titles III and V of NDEA; Titles I, II, and VI of ESEA; the Vocational Education Act; Adult Basic Education; etc.

.encouraging the development of effective pre-school programs through state-aided programs for research and development

.encouraging the systematic development of educational television by the formation of a statewide plan

.promoting the use of the various instructional technologies, including educational television and computer-assisted instruction, by providing state aid

.the development of a state plan for desegregating schools and for accomplishing quality integrated education

.preparing and implementing a statewide plan for the development and coordination of public and school library services

.preparation of a master plan for the orderly development of electronic data processing in the public schools, including the regionalized sharing of such services and the launching of demonstration programs on data-collecting and processing services

.the conduct of leadership state level and regional conferences on a variety of frontier developments in education, such as: pre-school education; new approaches to teaching the discipline subjects; employer-employee relationships; etc.

The foregoing are just some of the leadership functions which a state education department can perform. These activities become elements in an overall integrated plan, the development of which is in the mainstream of a department's activity, as discussed in a previous section on planning.

It is probably recognized that a key feature and common element in many of these activities is the provision of state aid in order to stimulate local school systems to conduct programs for the purpose of increasing quality and opportunity. Planning and exhortation are important; but it helps to hold out a carrot to accomplish given ends.

A major strategy in getting change is the use of dollars (no pun intended). It is no accident that the current Secretary of Health, Education and Welfare was a foundation president. An emergent function of a state education department is to act more like a combined management consultant firm and philanthropic foundation, able to provide consultative services on a wide variety of problems and to offer money to bring about correction and change on the basis of formulated plans judged by adopted state criteria.

It may well be, if local school systems cannot be depended upon uniformaly to improve fast enough and to attack critical problems on their own initiative, that the trend, following the example of the federal government, will be toward increased categorical aid at the state level at the expense of continuing increases in general foundation aid. (It is interesting to note a few signs in the opposite direction in the federal financing of education.)

But state education departments have other guidance functions which may include cooperation on a peer basis rather than a clear-cut coordinating or steering role. The entrance of the federal government in a serious way into education, urges upon state education departments the function of serving as a two-way channel of communication between local school systems and the federal government; in federal programs where the state agency has no clear, mandated, middleman administrative function. A department can assist local school systems in developing applications for federal research funds. Strong state leadership can provide guidance and coordination to local school systems in planning for Title III ESEA funds for supplementary services and centers. As the same time, it can assist the federal government in selecting those Title III projects deserving of highest priority.

The Economic Opportunity Act almost bypasses the states; yet some states have been able to exert strong influence on local school systems to do their part in community efforts to combat poverty.

Education has an important role to play in the Appalachian Regional Development Program. Cooperating with other state agencies in planning those educational developments which can secure additional local and federal support in order to improve regional productivity, is an important function for state education departments in several states.

The Cities Demonstration Program and Neighborhood Facilities Program will soon require that local school systems in large urban areas join several other local agencies, public and private, in improving blighted urban areas; and state education departments will be asked (as they already have) to assist in such planning.

Marshalling all the educational resources within any given geographical sector of a state--a region or a large metropolitan area--such as universities, colleges, the school system, the museums, the performing arts groups, television, etc., for the purpose of bringing them to bear on given problems, requires persuasive and imaginative leadership of the highest order. Research problems, the organization of supplementary educational centers under Title III of ESEA, and the development of regional educational laboratories under the Cooperative Research Act are three examples where strong state leadership can make a difference.

Although alluded to earlier, it would be well to emphasize that state education departments will find it increasingly essential to confer and cooperate with such sister agencies of state government as health, labor, welfare, state councils on the arts, state offices of local government, and regional planning, etc., in planning for curricular change and educational programming. Vocational education sectors of state education departments are more familiar with such cooperation. The point is that there will be an increasing number of specialized areas within state education departments which will find it necessary to join with other relevant state agencies in cooperative planning.

One penultimate word on guidance and coordination:

To date there have been imperfections of execution in the federal government as its agencies, particularly the Office of Economic Opportunity and the U.S. Office of Education, have launched vast new programs in order to correct deficiencies in our educational system. Some of these administrative flaws are understandable and will be corrected. Some ground rules and methods are not easily accommodated, either on a philosophical or practical basis. In any case, state education departments can serve as an important buffer or bridge of interpretation between the federal government and local agencies.

. . . .

In the following sections, some specific areas where increased guidance and coordination are needed, are developed in greater depth.

A. School District Reorganization - While school district reorganization has been mentioned as an important problem needing state education department leadership through guidance and coordination services, a greater sense of urgency in solving it must be created. While the number of school districts has dropped nearly 60 percent in ten years, there are still too many and the situation in some states is disgraceful. There simply is no excuse for the barrier of small inefficient districts when the expectation is that every child is to be educated to the utmost of his abilities and interests.

At the minimum, every state with a remaining problem should have a master plan of school district reorganization established by statutory authority in order to accelerate the creation of school systems large enough to offer the curriculums and services necessary to meet individual student needs and for the more efficient and economical operation of the schools. If such master plans provide only for voluntary reorganization, the states should at least offer incentive financial aid to induce reorganization.

Because education has become so important, the time has probably come to recognize that effective school district reorganization from here on out can only be accomplished by legislative fiat. It is, of course difficult to disabuse communities of the notion that local control and smallness are equated with quality. Too often their insistence upon local control is merely the exercise of their presumed right to be as bad as they want to be.

It may well be that by accelerating the process of making big ones out of little ones, so to speak, the problem of how to increase the quality of local leadership can be solved. As John Fischer of Columbia has said, there are not enough good school superintendents to go around. Fewer school districts will fit more readily the pool of leadership competence available.

At the other end of the problem of school district reorganization, is the rarer situation where large city school systems have become too big to be manageable and educationally effective. How to decentralize authority and responsibility to smaller units within a large urban area in order to make a central bureaucracy more responsive to local constituencies, is one aspect of the intense problem of urban education.

B. Vocational Education - Several courses of action were implied by earlier comments on vocational education:

- o the establishment of area vocational schools to distribute occupational education more evenly throughout a given state.
- o better planning for the development of occupational education programs, such planning to involve closer cooperation with commerce and industry in order that employers, labor force requirements, and job opportunities are brought into more productive relationship with the education provided.
- o a heavier investment in improved guidance and counselling.
- o provision for continuing education in order to accommodate the effects of quicker obsolescence of skills.
- o closer cooperation and understanding between the academic subject matter areas and occupational education.
- o working towards a parity of esteem between the academic subjects and vocational education programs and courses.

A few other observations are in order:

First, certification requirements for vocational education teachers and civil service requirements for state education department employment in vocational education, need drastic overhaul. Often, requirements are so inflexible and detailed as to make it impossible to employ someone in vocational education who is less than middle-aged. The requirements simply cannot be met any sooner. We need to relieve ourselves of the petty tyrannies of state regulations.

A University of Chicago Professor of Law has said:

> Law is not a positive good; it is a necessary evil. . .we may judge the excellence of our society not by how much law we have but by how little. . .

Secondly, it is probably commonplace knowledge that much of vocational and technical education is shifting upwards to the community college level, precisely because increased sophistcation is required to make a service-oriented and technological society work.

Fostering better cooperation between community colleges and secondary schools is essential in planning vocational education programs to be conducted by each, first, in order to avoid duplication, secondly, to distribute such opportunities better throughout any given state, and thirdly, to avoid confusing the public about what vocational education is and what the purposes of community colleges are.

It is not an infrequent observation that those in vocational education at the secondary level express little fondness for the community colleges, and vice versa. Community colleges sometimes behave as if they have a patent on educational nobility. Often, there is internecine warfare between the two. The Federal Vocational Education Act has aroused tensions, and not always creative ones. One is reminded of the pompous Church of England cleric who said one day to his non-conformist colleague, "We're both doing God's work, you in your way, and I in His."

Finally, it is hard to see even vestigial logic in the archaic arrangements in some states which provide for separate governance of vocational education. State education departments and vocational education boards should be consolidated. This is a time for wholeness, not fractionation in leadership.

4. Providing consultative services. A leadership department must be in a position to provide expert assistance and creative service to local school systems in helping them to solve local or regional problems, initiate new programs, establish complicated relationships, and develop their sophistication in strategies of constructive change.

Local school systems should be able to solicit assistance from a state education department in a wide variety of areas: Transportation efficiency, accounting systems (double entry bookkeeping and outside professional audits are now required in some states), school budgets, purchasing procedures, automatic data processing equipment and procedures, long-range financial planning, racial integration, adoption of new curriculums, in-service education practices, employer-employee relationships and mediation services, the installation of advanced placement programs, use of new instructional technologies, solving instructional problems for the gifted, organizing supplementary educational centers, introducing pre-school and parent education programs, foreign area studies, school district reorganization, special programs for the disadvantaged, planning for the use of federal funds, the development of a research program, evaluation techniques--these are just some of the specific areas in which school districts need assistance, even in large city school systems.

But all states cannot afford vast professional staffs for these purposes. There are other ways to achieve the same ends of improving quality, efficiency, and educational opportunity.

A state education department should have such relationships with the higher educational community of the state that it can call upon specific faculty and administrative officers of colleges and universities to assist neighboring school systems in specialized areas. Some state education departments will have funds to pay for such consultation; all should at least be in a position to know when to suggest that a school system should take the initiative in inviting it, using its own financial resources.

Source state education department personnel can spread their effectiveness and achieve a multiplier effect if they call state or regional conferences, to which teachers or administrators in given disciplines or administrative specialties are invited for orientation or consultation, e.g., all English teachers in a particular region coming together with state education department personnel to get acquainted with a new curriculum proposal.

Again, state education department personnel should have long since ceased trying to deal with individual local teachers. Instead, contacts should be with school system supervisors. For example, a state level supervisor or consultant on mathematics might restrict his advice to local supervisors of mathematics.

Another way to provide consultation is to establish different types of demonstration centers throughout a state (with state funds if possible) to which high public visibility would be given. To such demonstration centers, teachers and administrators could come for instruction or orientation. There are, in any case, pilot or lighthouse districts in any state where "best practice" prevails which could be similarly used.

There is another way to assist school systems. In one state a Cooperative Review Service has been established. Staff personnel (sometimes supplemented by college and university consultants) organize themselves as a task force to evaluate an entire school system in a two or three day visitation and render a comprehensive report on instructional and non-instructional activities, including school board relationships. The visit is preceded by a self-study performed by the school district. This service emulates regional accrediting procedures. It is another technique in exercising a department's responsibility for evaluation (to be discussed in a succeeding section.) Besides furnishing ordinary consultation at the request of any school district, the technique can also be used to focus on school systems, poor in quality, on an involuntary basis, and can contribute significantly in rounding out the information necessary in urban education where research and evaluation are requisite in dealing with the problems of large cities.

Even this kind of evaluative service can be adjusted to suit the needs of small education departments. For one thing, regional accrediting agencies perform a similar function for individual secondary schools, and state education departments, by developing closer relationships with such agencies, and they can rely on their reports in ing about change and increased effectiveness at the local level. Most regional accrediting agencies do not evaluate entire school systems, however, and most operate only at the secondary level.

Finally, a state education department can, at the minimum, develop a system which places greater emphasis on local self-evaluation by:

Setting quality standards;

Developing evaluative techniques for local use;

Monitoring local evaluations of educational quality;

Establishing a priority system for providing direct departmental assistance to those districts needing it most;

Developing the use of small expert study teams to provide the service to the neediest districts.

With this approach (and it is amplified in a section on regulatory activities), a department can exert a greater and quicker impact on improving educational quality statewide. Moreover, the program requires a smaller investment of departmental resources relative to results secured.

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A special note on instructional technology in relation to consultative services should be made here.

Instructional technology has suddenly assumed proportions requiring firm and imaginative leadership from the state level. Since innovation is fast becoming the new cliche, since education is a booming industry, because the federal government is extending generous financial assistance to education in general, and for instructional materials in particular, and in as much as commerce and industry, whatever their social conscience, are acutely aware that there is a profit to be made in education--the educational establishment is being flooded with hardware, much of it untested, some of it worthless.

There are other urgencies prompting education to explore the use of aids and media and large group instruction as means of improving the quality and increasing the guantity and efficiency of learning: the desire for a higher quality of education; the need for improving the organization and presentation of knowledge; rapidly expanding enrollments; and the shortage of faculties and facilities are a few.

State education departments should feel a deep obligation to be so staffed, organized, and equipped as to enable them to furnish consultative advice, demonstrations, standards, and evaluative services to local schools in order to help them make the most efficient and economical use of the educational media now being produced. State education departments have a similar obligation with respect to educational television, a field too often thought of as something different from other instructional technology and educational media. And lest things get out of hand, department staff responsible for leadership in this area need to know the relative priority to be awarded software as against hardware. One is, of course, subordinate to and follows from, the other.

Finally, inservice education should be emphasized as deserving high priority in accelerating educational change.

Ample funds and consultative services are needed for helping school systems to keep teachers up-to-date in their fields of knowledge and with new teaching techniques. In a more stable day, when knowledge and teaching methods did not change at the pace characteristic of them today, keeping current in one's own field of knowledge was considered an individual professional responsibility. It still is, in other professions, but no longer to the same degree in teaching at the elementary and secondary level. Now, because education is considered an investment and not a cost and because education has a first priority in the achievement of state and national goals, responsibility for keeping teachers abreast of current knowledge has shifted from the individual teacher to larger units of civil government representing society's interest in good education.

The states must supplement federal and local funds and provide imaginative ways in which all teachers, and administrators too, can participate in order to keep them au courant with the obsolescence of old facts and the quantum jump of new knowledge.

An effective teaching and learning process can be sustained against many adversities, but hardly against one in which transmitted knowledge contains error and falsehood.

5. Innovation and dissemination. Ideally,

of course, all professional personnel in a state education department would consider themselves as innovators and agents of change. It is too much to hope for in the short-run. The remedy over the long term lies in several specific activities and requisite conditions:

a. The posture or intellectual stance of a state board and its chief executive officer on innovation, experimentation, and creative service is overriding in importance. A conservative board and a commissioner of education who likes only riskless choices, will forestall change internally and externally quicker than anything else. It does not help either to have someone in charge who has an exuberant boundlessness for full and immediate accommodation of any novel educational fad that comes along. It does not pay to be so open-minded that one's brains fall out.

b. Given a positive attitude toward change, it follows that the historical importance of giving prime attention to regulatory functions deriving from legislative mandates, diminishes in relation to leadership activities. Heavy emphasis on carrying out regulatory activities, including strict interpretation of laws and regulations by unimaginative officials, inhibits change.

c. Planning for the long-range needs of education and the promotion of programs necessary to accommodate those needs are essential administrative next steps.

d. In a transition period, a state education department may even find it expedient to establish one or more units charged with responsibility for change and for inducting department staff into the new role of the department. One department has established a Center on Innovation, modestly staffed, to provide a prominent focus for change and innovation. Its job is to afflict the comfortable, internally as well as in the schools. Its purpose is to serve as a broker of ideas, to accelerate educational change on a statewide basis in order to raise the quality of education through the design, evaluation, and dissemination of new ideas and practices. It welcomes fresh ideas, encourages the trying out of new approaches in schools and colleges, evaluates the results, and passes these along to administrators and teachers throughout the state in an organized way.

Such a center, by providing a visible focus for change and innovation, can do much to promote throughout an entire educational system of a state an attitude that favors and fosters research, experimentation, and innovation--not change for its own sake, but change carefully calculated to improve the level of learning and to lift the status of teaching. Such a center also has responsibility for developing strategies and structures for accelerating educational change and for the engineering of consent.

e. Federal funds have established regional educational laboratories and research and development centers. State education departments should be partners, users, and promoters of such new structures.

f. A key provision in accelerating educational change is an organized dissemination system for desired new programs. As a minimum, this involves reporting through an information system, but it should go beyond this to a full-scale dissemination arrangement involving demonstration centers or techniques, inservice training, and adoption support.

g. Providing for an information system that furnishes a two-way flow between the field and the department, is essential to long-range planning, and current decision-making at all levels. The "information" stressed here is not statistical data but rather details of innovative programs and procedures.

The Education Research Information Center (ERIC) project established by the U.S. Office of Education is designed to establish informational clearinghouses and research documentation centers in specific programs with each center specializing in one specific area. A baker's dozen of such centers are now in operation.* Others are in the process of establishment, including one which creates a clearinghouse for state education department publications and documents. State education departments should subscribe to these services, but they will probably need to establish some supplementary intrastate system which solicits and redistributes information from their own schools and colleges.

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*Since July 1967 five additional clearing houses have become operational, making a total of eighteen.

With such systems, it should be possible for researchers to find out what is the status of research on any problem, and for practitioners seeking solutions to problems both to probe the research for keys to answers and to identify ongoing programs that may be demonstrating the answer.

Merely making a vast array of information more accessible will, of course, not be sufficient, but an effective information system and maintaining a knowledge inventory of the most advanced thinking can go a long way in reducing wasteful duplication of effort and insuring that research and practice in mutual interaction build more quickly to even higher levels of excellence.

h. The provision by a state legislature of funds to assist local schools, higher institutions, supplementary centers, regional educational laboratories, etc., in conducting research and experimentation and designing and establishing innovative programs, increases the force of a state education department's suggestions on the general need for change or on specific needs.

i. The emerging structures previously discussed are themselves a major strategy for change. Their intrusion will force all institutions to look at themselves. In addition to this strategy of structures with which state education departments can ally themselves in various ways, there are a number of more limited strategies for promoting educational change that are being increasingly used and can be advocated by sophisticated department staff: They include the pilot project; the demonstration project; the cadre approach (training a team of change agents in a school system); introduction of a change agent from outside the school system to act as a catalyst for change; establishing an experimental subsystem in a large school system; the thing approach (the strategy that seeks change through facilities, equipment, and instructional materials); the seeking and supplying of information (the introduction of double-entry bookkeeping or the taking of a racial census are dramatic in the changes introduced); and, finally, the systems approach (based on the premise that education is a complex of closely interrelated activities and a change in any one part of a system, therefore, has ramifications in others).

j. Finally, one very necessary provision in rounding out any existing circle of felicities in accelerating educational change, should be highlighted. Ample funds should be provided for professional staff to travel beyond the borders of their own state. No state has all the good ideas, and sometimes it helps to see something work first-hand.

Professional competence can be improved by making it possible for employees to travel to outstanding educational innovations in operation in other parts of the country or even abroad, to stay at these locations for intensive study or extended saturation periods, and then to return to report on, put in practice, or disseminate information about what was learned.

6. Research and collection of information. Too few state education departments have either research capabilities or research obligations. A department's research interests should encompass: (a) internal, departmental management concerns and (b) external, field needs and opportunities for educational programs, materials, and methods. There are many ways to lead.

a. As in the case of innovation, a department's posture on change and research, its spirit, and the attitude of its personnel have much to do with creating a dynamic climate for research and experimentation within a state.

b. A department should be so staffed that it can exercise some degree of leadership in organizing a state's total resources for engaging in educational research. In one state, the department took the initiative in creating an association of state educational research personnel, establishing formal liaison with key research personnel in the state's higher institutions, conducting annual research convocations, arranging for an inventory of research studies showing the gaps remaining, and then aggressively setting about to stimulate research needed. In short, a community of educational research interests was created.

c. Thirdly, by joining or maintaining

close liaison with the newly developed regional educational laboratories and research and development centers, state education departments can contribute substantially to research developments. They can suggest needed research and facilitate cooperation between higher institutions and local school systems. They can place the weight of their hegemony behind projects, thereby adding to the prestige of the outcomes and hastening the adaptation of results into regular school practice. Finally, by joining research groups and adopting a position of strong advocacy for research, state education departments are in good position to know when to suspend, at least temporarily, otherwise constraining state regulations, in order to create the most salutary climate for research and experimentation. This wise exercise of a regulatory function can, paradoxically, promote rather than inhibit change. At the very least, state education departments can get out of the way of school districts ready to make new departures.

If education departments do not assume an obligation to encourage, assist, and participate in the development and conduct of such research groups, departments will be bypassed. These new complexes will succeed anyway, and their orientation then will be exclusively toward schools and the federal government instead.

d. Fourthly, departments should have research personnel available who can provide technical advice and consultative assistance on research design in the development of locally sponsored research and experimental programs.

e. For a state education department to lead most effectively, in short, to have its suggestions adopted, it helps to have state funds set aside to supplement federal and other sources for experimental purposes. Considering the increasingly large investment being made in education by the people of any given state, it seems only prudent that, as a matter of state policy, a modest sum should be set aside each year for experimentation and research, as risk and venture capital for maintaining a constant and systematic search for new and better ways of doing the educational job. Monies thus reserved (as a goal, an amount equal to one percent of annual state aid granted school systems), would be allocated to projects that promise to lead the way to better expenditure of all school funds, thus helping to guarantee a maximum return on the people's investment in the public school system.

It is the view in this corner that comparatively little basic research should be conducted by state education department personnel. There are two exceptions: 1. an occasional project is good for intellectual refreshment; and 2. state aid costs and changing educational conditions being what they are, continuous departmental research on state aid is essential. But a department can hardly afford all the personnel needed to search out the answers to all problems and issues. A wise department, then, is one that knows how to identify needed projects, is able to enlist the interests of competent research people, and hopefully, can assist in financing them.

f. The availability of federal funds for research in vocational education should enable some departments to expand their research capabilities in this field. Opportunities are thus opened to coordinate research in vocational education throughout those sectors of the higher educational community competent to perform such research. Often, such coordination will involve interrelationships with other state education departments and higher institutions in other states.

g. Status studies on the condition of education are an important responsibility of a research component in a state education department. Basic data as well as testing or evaluative results are necessary for making such studies.

h. A capable research unit is the proper setting for a highly developed information system for gathering basic educational data about elementary and secondary education. Information is necessary for decision-making and long-range planning, not to mention interpretation of the status and progress of education to the public, state legislative representatives, and the educational community.

Two kinds of data are necessary: (a) basic frame-of-reference data; and (b) specific program data. The first category covers information that describes the expected conditions or environment in which a department's programs will operate, and comprises the framework within which a department can plan its role, set its objectives, and apply its resources. It takes the form of long and short-term growth rates and projections on the size of the educational task, the range and kinds of resources probably required, and anticipated needs and new opportunities for a department. These kinds of data highlight the difference between the educational needs of today and those of the future, help to pinpoint particular problem areas and outline opportunities for improvements or new approaches in departmental programs, and assist in the defining of program objectives.

A second category of data is the information that defines individual programs conducted by the department.

Electronic data processing and closed-circuit television, particularly the first technology, are essential components in supplying and receiving basic educational data with accuracy and dispatch.

State education departments, in planning the establishment of information systems will have to consider two things: First, is the necessity to cooperate with federal officials (compelled by their own planning and accountability requirements of reporting to Congress and to their many advisory groups to secure information), in order to ensure that data systems are compatible, thus avoiding much duplication of effort at state and local levels. Secondly, unless state education departments establish sophisticated information systems, they will soon find that Washington has to go directly to local institutions in order to secure data, thus bypassing the states.

7. Evaluation. State education departments may have been exhorted for years to institute evaluation systems or systems of quality measurement and performance for determining the condition of education within their state borders, but not much has been accomplished, probably for several reasons:

a. The obsession of local control;
b. The fear of pitiless publicity on the results;
c. Education not a national commitment;
d. Evaluation only voluntary, not mandated;
e. The difficulty of the task;
f. The belief that the important outcomes of education cannot be measured;

g. Inadequate knowledge base;
h. Lack of capacity for handling voluminous data.

Now things are different. It is now clear that:

a. Education considered important;
b. Legislative requirements on evaluation (Title I ESEA), the growth of progaam budgeting, and increasing public concern with the effectiveness of education in relation to costs will compel systematic evaluation;
c. There are mounting convictions that the problem must be conquered simply "because it is there;"
d. There is a growing body of knowledge in the field of education and in the behavioral sciences which can be brought to bear on the problem; and
e. Electronic data processing has an infinite capacity for storing, processing, and retrieval of information.

Only the fears of excessive control over the local schools and their curriculums and of pitiless public visibility on the comparative weaknessess and strengths of local schools, remain to be eroded.

Such fears are expressed most frequently by weak administrators and school systems. Similarly, states not especially noted for their educational strengths are the ones who resist any attempt on the part of federal government to assess the status of our educational system. Why, as John Fischer has asked, should a testing program become a federal offense the moment it crosses a state line and comprehends more than one state?

Someone has remarked that "control" is strictly an amoral term: "It becomes either immoral or moral depending on how control is exercised and for what purposes."

At any rate, it seems highly unlikely that governmental control of the stultifying, rigid kind envisioned by these stout resistors would ever evolve within the American framework of thought and action. It is in our native blood to maintain diversity and dispersed, innovative initiatives.

Evaluation has two dimensions. One aspect pertains to measurement of educational performance in an educational system, the other to the outcomes of department-sponsored or -administered programs. Both external and internal evaluative research is needed for decision-making and long-range planning purposes.

Internally, the concern is with the development of cost effectiveness or cost/benefit analyses as the basis for reevaluating the allocation of available resources. The question is: What analytical techniques can be developed for balancing educational effectiveness against the cost of producing it and for evaluating comparative costs of alternate ways of producing the same degree of effectiveness?

In the review of a department's regulatory activities and its guidance and coordination services, several searching questions must be asked which can be effectively answered as to whether such activities and services can be improved, discarded, or delegated, only if evaluative techniques are employed both at the state and local levels. (See discussion on the Regulatory Function).

Externally, in judging the outcomes of the teaching and learning process, there are, of course, several nationally known testing instruments available. A state education department can exercise leadership by encouraging or mandating periodic and statewide use or by developing its own instruments for this evaluative purpose. Consultative services, in any case, should be available from a state department to help localities in developing locally used evaluative procedures and techniques. Such assistance, especially, is becoming more urgent in view of the encouragement given to local schools through federal funds to develop imaginative programs for educating the disadvantaged (Title I, ESEA) and for enriching the regular curriculum (Title III, ESEA).

The least a state education department can do is to encourage local school systems to participate in the conduct of the National Assessment of Education program previously discussed.

But, all testing instruments currently available are normative in approach, and deal only with relative achievement. They furnish status studies which compare schools with each other. One department is developing a different approach by intensively exploring whether reasonable standards of educational expectancy can be established, in view of school and student resources and conditions, based not on what other schools have achieved, but on what schools with such resources and conditions ought to achieve.

This approach is based on economic theory of inputs and outputs.

Let us consider some of the uses to which a system of educational indicators might be put. Their primary value will be to help all of those responsible for education to do a better job. Good indicators will provide educators at each level from the classroom up, with warnings of changes that portend difficulty if not attended to. They will help them assess relative need and the consequences of choosing various courses of action to meet those needs. When program decisions have been made, the indicators can help determine whether objectives are being realized and assist in locating specific sources of difficulty when they are not. By relating changes in indicators to costs of producing them, some measure of cost effectiveness in education can be realized.

On the state level it should be possible to obtain detailed indicators of how the schools as a whole or any selected segment of them are doing. This information can then serve to guide the decisions of the state education department, the governor and executive departments and the legislature. A system of incentives might be devised to encourage systems to exceed expectations. Areas of severe weakness could be identified and corrective measures instituted.

Commissioner Harold Howe II suggested recently that states should set a "minimum level of quality for their schools." He is quoted in news reports as saying:

> Having determined that quality base line, the states must tax sufficiently to make sure that no school falls below it. If the local community wants to soar above that level, well and good.

A good indicator would provide that base line.

Moreover, when persistent failure of a local school district to improve is the result of the failure of individuals to carry out their responsibilities, the indicators can provide the basis for appropriate action.

The Cooperative Review Service discussed in an earlier section is another means of providing evaluative services for school systems.

In summary, only those educators who are members of the Flat Earth Society are prepared to bet that the educational community will not be called upon to provide increased accountability to its many constituencies for the financial support received. Evaluative techniques will need to be employed in order to improve the decision-making process in education for the sake of justifying additional support and of enhancing the teaching and learning process and its efficiency.

It will not be easy. As a recent political scientist has said:

> ...if attempts are not made to develop information systems and program planning and budgeting systems, of wide, as well as detailed applicability, how can the fundamental political questions of wise resource allocation be answered? The accounting aspects of the problem are simple compared to the conceptual problems inherent in applying cost-benefit analysis to soft services.

8. Interpretation and involvement. State education departments have not been well known for their capacity or competence to interpret education and the services and functions they perform, to the public, legislators, and to the educational community. Few departments are organized to collect, interpret, and disseminate information on the condition, progress, and needs of education so that the public knows the needs, has guidance in making wise choices, and is helped in expressing a collective will. This deficiency is glaring at a time when education has become identified with the nation's welfare and the schools have surfaced to prominent view in the political arena.

The department that performs the functions previously outlined will have a public information office that draws on the various units within the department for the issues, materials, and data needed to interpret needs, opportunities, and accomplishments. A sophisticated and aggressive information office can furnish the technical competence for disseminating intelligible information through the most appropriate medium.

Keeping legislators and the public well informed about education is of course mutually enriching: the public knows what is going on; the department thus acknowledges its accountability and is rewarded with the confidence (and probably additional financial support) it deserves.

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An aggressive department engaged in more than regulatory functions, will recognize, too, the compelling necessity for greater involvement of advisory groups of various kinds using experts, educators, lay citizens, business leaders, and legislators in order to help the department to assess progress, to develop new programs and services, to solve pressing problems, to interpret decisions and plans of state boards, to revise regulations, etc. A greater lateral outreach to those who have a stake in the eventual decisions made by civil government provides rich dividends. Consensus strengthens later central decisions because it is known in advance that there will be constituencies which will support them. The technique of involvement helps, too, to rupture the stereotypes (the process of caricature-assassination) of bureaucracy to which units of civil government are subject. Finally, the involvement of others aids in disseminating information about what a department is doing.

Part V
Internal Organization and Administration

This section will be a catch-all for some observations on likely changes in internal organization and administration caused by the general impact of the forces now bearing upon state education departments.

1. The Regulatory function. In a day of rapid change, state education departments aspiring to

become viable leadership agencies, will need to place greater emphasis on policy control and on high-priority guidance and coordination activities at all levels. Such activities are becoming the primary means by which a department can accomplish its basic mission of ensuring that a high-quality education is available to all people in the state. This change in role will force a continuing search for ways to delegate authority for less important administrative and operating activities, whether regulatory or service functions; to local agencies and to regional or national groups; e.g., a national or regional accrediting agency. The argument is that a state education department's basic responsibility is not necessarily to provide a service or perform a function itself, but to ensure its provision in the most effective way.

To minimize a department's allocations of its resources for regulatory functions and to make sure that all service programs are essential, each activity must be analyzed to determine answers to the following questions:

1. Does the activity need to be performed at all?
2. If it must be performed, can it be delegated to the local districts (at least to the stronger ones) or to other appropriate institutions or agencies?
3. If it cannot be delegated, what are the cost/value relationships for the department? Is there a better way for the department to perform the activity?
4. Can the department provide the same level of benefits by (a) developing and disseminating quality standards and guidelines for local use; (b) auditing the performance of the local agency against the standards; and (c) providing guidance and assistance to those elements that are below standard?

However a department deals with its regulatory functions, it must be responsible for establishing minimum standards below which local school systems are not allowed to go, and for acquiring the necessary professional resources for enforcing them. Our society is one based on an Anglo-Saxon heritage, socially and legally. It operates on the basis of minimum standards for behavior and performance below which people and institutions are not permitted to fall. No school system should have the freedom in this modern day to ignore the need for maintaining a minimum level of educational expectations, a level, it may be added, that is constantly rising.

Since local school systems do not uniformly set such standards for themselves, the state must--and if a state will not, the federal government eventually will.

Both local and state initiatives are needed to pose high ideals of excellence in the Greek sense, in order to raise aspirations and the prevailing level of educational expectations.

This is the increasing role of a state education department then; to minimize regulatory functions and, instead, to provide such assistance to local school systems as will enable them to go beyond any given level of quality. A department should work, not by mandate nor by compulsion, but by pointing to a better way.

But this discussion of the regulatory function should not be misinterpreted. Riesman has stated that "bureaucracy is essential for fairness in the administration of any complex task." Taking the word "bureaucracy" in its benevolent and enlightened sense, and not pejoratively, it follows that regulatory functions are basic to a governmental agency from which all of its leadership and innovative potential flows. Regulatory functions can give thrust and character to the creative and coordinating services provided by a department. And imaginative use of regulatory functions in and of themselves, can assist in effecting change, not inhibiting it. In short, the regulatory function goes far in creating the setting in which all other activities are effective or not.

A state education department will know when it has achieved a leadership position; when it has the prestige in both its service and regulatory operations to support almost uniform compliance throughout a state while acting almost solely in a service capacity. (A wise observer will note that language can also make a difference. The sad words in the inhibitive exercise of the regulatory function are regulations, rules, mandates, and controls. The happy, persuasive ones flowing from an opposite creative role, are service, assistance, monitoring, and auditing).

Teacher certification is a traditional, regulatory function of state education departments, but the day of course-counting, credit-picking, and transcript-scrutiny, is over. States are finding it useful to accredit institutional programs and to certify individual students automatically upon graduation based on a simple listing of names furnished by the institution. Provoked by the constructively abrasive recommendations of James B. Conant, one state has suspended all state regulations on teacher education for five higher institutions in order to promote more creative programs of teacher preparation, with the department acting as instigator, supplier of funds, monitor, coordinator, and critic. Graduates of the experimental programs are automatically granted certification on recommendation of the institution. Interstate cooperation in certification on a regional-national basis is fostering reciprocity between the states and eliminating the barriers to increased mobility of teachers.

Another state is delegating to local superintendents on a selective basis, authority to certify teachers, thus relieving the state of the administrative burden. Again, reliance on accreditation by the National Council for the Accreditation of Teacher Education and on the results of the National Teacher Examination relieves some states of detailed administration with probably better results.

Certification requirements are increasingly being stated in broad, general terms instead of specific course credits. Finally, certification requirements are being suspended in some states altogether in order to accommodate teachers from foreign countries who do not intend to become citizens of the state in which they are to teach, and who could not possibly meet the usual certification requirements. The purpose of doing so, of course, is to foster educational exchange and greater international understanding.

The foregoing imaginative procedures keep control of the regulatory function in the hands of the state, but conserve resources for more important services simultaneously as other educational purposes are advanced and administrative effectiveness increased.

2. Organizational flexibility. In a day of rapid expansion and change, a state education department interested in assuming an innovative and leadership role will soon perceive that to be effective, its procedural practices and organizational structure must be flexible to accommodate administrative expansion, to permit modifications, and to discard low priority functions and programs without undue difficulty. In short, the task is to erect an administrative structure which can readily ingest, digest, or disgorge activities, whether these are funded by state, federal or private foundation funds.

This is not easy to do. The spirit of an agency has much to do with the grace of its movement, regardless of organization, but structure helps. Large comprehensive and coherent line administrative units (versus detailed compartmentalization or "atomism packed tight") lend themselves to orderly change and also provide clear definition of internal responsibility and accountability.

3. Increased need for internal administrative coordination. Federal programming in particular but the general trend toward inter-locking complexity and interdependence in so much that affects education, will also influence a department's administrative pattern and organization. Formal internal provision for administrative coordination among interrelated offices and activities within a department, is essential.

Voluntary inter-unit communication and coordination are always necessary, but even if natural and amicable, they can no longer cope administratively with the complicated, large-scale, broad-purpose, often technical tasks that must be assumed. Unless a department recognizes this growing complication calling for effective organizational changes, an inordinate amount of time will be spent trying to achieve programmatic purposes and to reduce tensions and conflicts between related and competing offices. Administrative officers especially charged with coordinating functions will be needed and clear policies on articulation promulgated.

There is a peculiar phenomenon associated with federal programming in particular, (or with any departmental services and administrative functions not wholly supported by state funds). An administrative law might be formulated: like chameleons, professional departmental employees tend to take on the coloration of the particular funds which furnish their employment. Commitments and loyalties of professional employees within a single department can be as diverse as the source of the funds, federal, state, foundation, or other private, which support them or the programs to which they administer.

It is not infrequent, for instance, that employees administering to an important federal program will feel stronger loyalties and ties to federal objectives and respond more readily to federal directives and guidelines than they will to state or departmental goals and instructions.

A case in point is vocational education. For too long, those who administered a state's vocational education program, typically largely or wholly supported by federal funds, carried on like an almost autonomous, isolated unit within many departments. They constituted an enclave. Recent efforts in some departments to bring vocational education into more intimate relationship with other disciplines and curricular activities and with technical and vocational programs at the community college level, have been met with pronounced strain, conflict, and tension. And the vocational education sector in the U.S. Office of Education, until recently, was as much responsible for this state of affairs as the states themselves.

At any rate, the importance of making deliberate provisions for administrative coordination within a department is heightened by increased federal programming. It takes strong and daily effort to administer a mixed economy.

4. Mission-orientation and task force development. The discussion thus brings us to some other characteristics of society which influence patterns of operation within a state education department.

Warren G. Bennis, Professor of Organizational Psychology and Management and head of the Organization Studies Group of the Alfred P. Sloan School of Management at Massachusetts Institute of Technology, in a provocative article entitled "The Coming Death of Bureaucracy," suggests that such forces as rapid and unexpected change; growth in size where the volume of an organization's traditional activities is not enough to sustain growth; the complexity of modern technology where integration between activities and persons of very diverse, highly specialized competence is required; and a basically psychological threat springing from a change in managerial behavior--all of these threaten the end of the hierarchically organized bureaucratic structure. He emphasizes, as this paper does, the growing interdependence and interlocking complexity of social and organizational behavior.

And we turn to Alvin Weinberg, Director of the Oak Ridge National Laboratory for another and related illumination of a facet of our society which may have meaning for state education departments:

> Our society is 'mission-oriented.' Its mission is resolution of problems arising from social, technical, and psychological conflicts and pressures. Since these problems are not generated within any single intellectual discipline, their resolution is not to be found within a single discipline. Society's standards of achievement are set pragmatically: what works is excellent, whether or not it falls into a neatly classified discipline. In society the non-specialist and synthesizer is king."

What do these characteristics of society and developments portend for state education departments?

One can anticipate that a department will increasingly utilize the task-force or team-form of organization calling for the collaboration of specialists in a project. The task force type of organization is especially suited to implementing the purposes of much federal legislation and to solving some of the complex educational problems with which state education departments and localities are confronted.

The task-force type of administrative operation "pools and coordinates the talents of diverse individuals with widely varying skills" and even differing institutional commitments.

Mr. Bennis describes the unique characteristics of organizations of the future:

> The key word will be 'temporary.' There will be adaptive, rapidly changing temporary systems. These will be task forces organized around problems-to-be-solved by groups of relative strangers with diverse professional skills. The group will be arranged on an organic rather than mechanical model; they will evolve in response to a problem rather than to programmed role expectations. The executive thus becomes a coordinator or 'linking pin' between various task forces. He must be a man who can speak the polyglot jargon of research, with skills to relay information and to mediate between groups. People will be evaluated not vertically according to rank and status, but flexibly and functionally according to skill and professional training. Organizational charts will consist of project groups rather than stratified functional groups. (This trend is already visible in the aerospace and construction industries, as well as many professional and consulting firms.)
>
> Adaptive, problem-solving, temporary systems of diverse specialists, linked together by coordinating and task-evaluating executive specialists in an organic flux--this is the organization form that will gradually replace bureaucracy as we know it. Organizational arrangements of this sort may not only reduce the intergroup conflicts mentioned earlier; it may also induce honest-to goodness creative collaboration.

> I think that the future I describe is not necessarily a 'happy' one. Coping with rapid change, living in temporary work systems, developing meaningful relations and then breaking them--all augur social strains and psychological tensions. Teaching how to live with ambiguity, to identify with the adaptive process, to make a virtue out of contingency, and to be self-directing--these will be the tasks of education, the goals of maturity, and the achievement of the successful individual.

Implementing Title I of ESEA, whose purpose is to put the educationally disadvantaged on an equal footing with other contemporaries who have benefitted from better opportunities, is a mission-oriented type of legislation. So is the Demonstration Cities Program. The Center on Innovation proposal described earlier is firmly rooted in the accomplishment of a mission. Program budgeting is highly relevant for analyzing the complex inputs and outputs of broad, mission-oriented programs.

The problems of urban education are so vast and intensive that they are beyond the abilities of one person to comprehend, let alone control, and cut sharply across any internal organizational lines established by a state education department. The establishment of a modestly staffed Office of Urban Education gives high public visibility to the concerns of the state for education in urban areas, provides a focus for coordinating internal relationships with large cities, and helps to redress the imbalance of rural orientation still characteristic of some departments.

The growing trend in secondary schools to [illegible] society, and contributing to the achievement of a cultural democracy. The administrative unit has a mission which can only be carried out by a collaborating team of specialists.

Establishing a state level program to achieve desegregation of the school and racial integration is an educational enterprise not narrowly conceived. It requires long-range planning, complicated execution, and the ministrations of a variety of sensitive specialists devoted to a mission having moral, social, and legal roots.

Imposing one or more task-force, mission-oriented projects on a classical, steeply hierarchial, bureaucratic structure of a state education department, unsettles the familiar, induces tensions, and creates conflicts. The answer is simple: usual fixed lines of authority are broken and neat areas of responsibility are made ambiguous.

5. Decentralization of administration. Finally, some large and heavily populated states will find it necessary to decentralize the administration of many of their services and functions, for several compelling reasons: first, the need to be more responsive to local needs; secondly, to speed the sheer process of doing business; thirdly, to achieve better planning and coordination of resources and programs; and fourthly, to accelerate the process of change.

The establishment, with state assistance and planning, of Title III ESEA supplementary centers may furnish some states with regional foci for the foregoing purposes. Other states will establish intrastate regional offices, wholly state supported. One state is experimenting with decentralization by locating its own personnel in the local administrative headquarters of large city school systems in order to carry out certain programs, for instance, Title I ESEA. The formation of large intermediate units or boards providing shared cooperative educational services afford another means of decentralizing certain department services.

6. Conditions of employment; State Board of Governance. Finally, comment should be made on two other matters which have high relevance for state education departments if they are to assume

any significant proportion of their emerging functions in the light of the issues and trends of the day.

First, state education departments, if they are to provide effective state leadership and partnership with federal and local agencies, must have the conditions of employment and the basic inducements necessary to secure and maintain a highly skilled professional staff. A company is known by the people it keeps.

Where does each state stand on such considerations as the following?:

a. salaries and collateral perquisites continually competitive with those prevailing in the recruitment sources, either in or out of the educational community, from which professional personnel are usually drawn;

b. the creation and maintenance of pride and competence in a professional staff not subject to political control and manipulation;

c. a prevailing climate according generous hospitality to experimentation and innovation and a spirit conducive to the rapid promotion and accommodation of essential change;

d. the allocation of high priorities to leadership activities rather than to regulatory and supervisory functions, necessary as the latter are.

Secondly, the manner of selection of the state board and chief school officer and the relationship between the department and the state board are important considerations in developing state leadership in education. The author can be as prejudiced as anyone else. All he needs is the right subject.

Clear preference is for the appointment of individuals to a small state board by the legislature for fairly long overlapping terms. An alternate method is appointment by the governor. In either case, the state board should select the commissioner or superintendent to serve at its pleasure. In some cases, contracts might be necessary.

State boards of education on the average are not especially noted for the high caliber of their membership. One way to bring about innovation and change is for the states to establish recruitment and selection procedures which result in the appointment of outstanding citizens to a prestige board. A state board that cannot at the minimum interpret with clarity, perceptiveness and conviction, to the public, the educational community, and the political arena, the educational needs of its own state without fear of political reprisal or the recriminations of special vested interest groups, is hardly more than custodial in function.

Part VI. Relationships With Other States and the Federal Government

Up until the recent past, there was little if any effective cooperation or relationships between neighboring state education departments, let alone those in non-contiguous states. To be sure, there were annual gatherings of chief state school officers in distinct geographical sections of the country, but their productivity (meaning the real improvement of educational opportunity, its quality and efficiency,) has been at best questionable. Stated most cynically, many such sessions were devoted to unconstructive criticism of the federal government and poorly chanted litanies of woe.

The increasing national interest in education and federal financing, even of state education departments, has changed all of this. So have the growth of metropolitan areas which cross state lines; the nature of educational problems (like integration) which cross state and school district boundaries; the establishment of research and development groups over wide geographical areas, to ponder research problems and means of innovation; the formation of educational-industrial complexes to furnish better educational materials and which are national and regional in scope and significance--all of these are forcing state education departments to recognize that they are losing some, at least, of their identity as well as their authority (in the historical sense of being sovereign, isolated entities).

Section 505 of Title V ESEA, in particular, has furnished the several states opportunities to band together in regional and national groups to solve many of their common problems in such fields as educational television, improvement of communication and public information, educational assessment, teacher preparation, teacher certification, international education, the role of demonstration centers, educational informational systems, fiscal and personnel accounting, instructional materials, preschool programs, school district reorganization, pupil transportation, etc.

Vocational education research funds have fostered cooperation between states, and between states and higher institutions.

The direction of the future is clear: regional and national cooperation between the states; the gradual relinquishment of "territorial imperatives;" still guarded but growing partnership with the federal government; a rising level of competence in all state education departments; and a trend toward uniformity.

CHAPTER X

THE ADMINISTRATION OF VOCATIONAL EDUCATION AS AN INTEGRAL PART OF A STATE DEPARTMENT OF EDUCATION

A Supplementary Background Paper

Byrl Shoemaker*

Shoemaker examines federal assistance to state departments of education and state divisions of vocational education with other state divisions. Finally, Shoemaker discusses the organizational pattern of state divisions of vocational education and offers suggestions as to how divisions might be structured.

Introduction

The state's legal responsibility for education may have been an act of omission rather than an act of commission. Whatever the reason, the assignment of the responsibility for education to the individual states is a very important safeguard for our democratic way of life. No individual or organization at the national level can gain access to or control of the educational process in order to indoctrinate the minds of Americans with his particular concepts of governmental or social change. Wahlquist and others in a review of administration of public education suggest that while education is a legal function of the state, there is really a cooperative relationship between the state education department and local educational agencies.[1] Wahlquist et al. suggested in 1952 that the States had accepted little real responsibility in the overall program of education, at that time.

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[1] Theodore L. Reller, State School Administration The Administration of Public Education, Ed. John T. Wahlquist et al. New York: The Ronald Press Company 1952), Chapter 3, pp. 64-93.

Since 1952, there have been many changes in the educational scene. Among these changes are the growing importance and expanding leadership role of State Education Departments. The organization and operation of the State Education Department today is much more complicated than in previous years. This can be attributed to the increasing number of services these departments now offer. Also, one can see this in the tremendous increase of federal funds state education departments now handle.

Robert F. Will, in a 1964 study concluded, "Few, if any departments are adequately staffed to provide leadership services to local school districts."[2]

Henry Brickell, in his report on, "Organizing New York State for Educational Change," made the statement that the department for the administration of education in the State of New York was too small and could never be large enough.[3] Considering these two conclusions I would like to raise two questions. First, how many state staff members are needed for "adequate staffing"? Second, what criteria should be used to establish the number of staff members needed?

In reviewing Will's report, an observation is that only a small portion of the professional personnel employed through the Division of Vocational Education and through the Division of Vocational Rehabilitation in Ohio were included. This leads me to question the accuracy of the number of staff members reported for the states.

Fred H. Beach and Andrew Gibbs in a 1950 study made a finding of significance to State Departments of Education in relation to adequate staffing. Beach and Gibbs found that in terms of the amount of staff time expended in the State Departments of Education, Vocational Rehabilitation was first, and Vocational, Education was second. So far as the number of personnel in State Departments of Education, Vocational

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[2] Robert F. Will, State Education Structure and Organization (Washington, D.C. United States Government Printing Office, 1964).

[3] Henry M. Brickell, Organizing New York State for Educational Change (Albany, New York: University of the State of New York, State Education Department, 1961).

Education was first, and Vocational Rehabilitation was second.[4] So far as the number of personnel in State Departments of Education, Vocational Education was first, and Vocational Rehabilitation was second.

The significance of these situations relates to the availability of funds for the employments of staff personnel through the use of Federal funds made available through the acts providing aid to the States for the stimulation of such programs.

As we discuss the function of and organization for vocational education within a State Education Department, it can be noted that every state in the nation and each of the territories has some organization within the state or territory responsible for the organization and supervision of vocational education programs for youth and adults, and for the administration of state and federal funds maue available to that unit for program development and program operation.

In a period of time in which there is a tendency for federal agencies to by pass State education departments, perhaps the only hope for maintaining of state and local control of education is the massive expansion and improvement of state education department.

Factors and Trends in Organization of Education Services at the State Level

Wahlquist *et al*. in 1952, pointed up an issue between educators and political scientists over whether education is a part of state government or apart from it. Will pointed out, in his 1964 study, that this still is an issue. This separatism is further exemplified in that Will's study ignored the problem of education beyond high school in terms of the growing needs for people to return to some public education agency for services at several points in a lifetime.

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4 [4] Fred H. Beach and Andrew Gibbs, *The Structure of State Departments of Education* (Washington, D. C.: U. S. Office of Education, Miscellaneous, Number 10, Government Printing Office, 1950).

Students of state educational administration usually recommend a central education agency with a state board of education representing the people and serving the legislative and policy making function. They recommend a chief state school officer and a staff to provide for the executive function with the Chief State School Officer to be an educator and selected by the state board of education.

The political scientist, on the other hand, usually does not advocate government by commissions; they believe that a State Board of Education confuses political with administrative functions. The political scientist would suggest a chief state school officer as the administrative head of an agency, and having the responsibility for most executive, legislative, and judicial functions of the department. They suggest that the person be appointed by the Governor and that the Chief State School Officer establish boards to serve at pleasure of his office.

There is however, the third possibility of a combination of the procedure recommended by the educators and that recommended by the political scientists. While Will indicates there is a trend toward the concept of the selection of the state board of education by the people, he also indicates that there is no master plan for all states and that it is difficult to identify clearly the conceptual pattern of administration followed by each of the States. There seems to be agreement, however, that the educational agency still operates under the power of the executive, legislative, and judicial branches of government even if established apart from it.

The method of selecting chief state school officers at the time of the 1964 study gives additional light to the administrative problem.

Appointed by state board of education -- 23

Appointed by the Governor -- 5

Popular election -- 22

A division of the organization of state departments of education into four broad program areas as suggested by Will, namely elementary and secondary, higher, vocational rehabilitation, and cultural education, does not seem to be clear-cut from the data provided in his study. Two other observations may be noted. First, there seems to be a growing trend toward the establishment of separate agencies for administration of higher education, rather than an integration of higher education into State Departments of Education Second, the administrative unit for vocational education is normally established in the division concerned with instruction.

Another situation prevalent in State Education Departments is that staff personnel usually advance through experience in education or allied fields and gain their experiences in state department administration through on-the-job training, while on the other hand universities throughout the Nation are concerned with the preparation of administrators and other support personnel for local school districts. One exception to this is The Center for Research and Leadership Development in Vocational and Technical Education at Ohio State University. The Center pursues state leadership development in vocational and technical education, this problem area being one of its major challenges.

Function and Role of State Departments of Education

Like objectives of education, one can find in the literature a number of listings of the functions of state education departments. Wahlquist identifies the following functions as the responsibility of state education departments:

A. Regulatory
B. Leadership
C. Research
D. Planning
E. Coordination
F. Advisory
G. Direct Service Function (intermediate unit)

As with goals of education, it is easier to identify and name the functions than to provide the personnel and organization that are necessary to implement the functions. It would be most beneficial to state education departments if programs were developed to train leadership personnel for these functions.

Parallel to such programs, it would help to have in-service programs for personnel now working in the departments of education.

Obviously, the state education department has numerous roles to play for the benefit of the educational programs within the state. Perhaps the most common role and one that cannot be ignored is the role of the administration of the funds allocated for maintenance or improvement of educational programs within the state. This responsibility includes the administration of state and federal funds allocated for the use of the local public schools. Most state foundation programs are planned to provide general aid to the local public schools, but also provide categorical aid to such areas as special education, vocational education, and physically handicapped. Federal funds made available to state education departments are normally classified as categorical aid. Funds of this type are allocated by Congress through such acts as the Smith-Hughes and George-Barden Acts, Vocational Education Act of 1963, the Elementary and Secondary Education Act of 1965, the Manpower Development and Training Act, the National Defense Education Act, and other acts providing money for services to education within the individual States through the State Education Departments.

There is no question but what the State Education Departments have a leadership role to serve in relationship to the programs in the individual communities. Specific attention needs to be given to the area of supervision or administration. Perhaps this should be truly a role of superior vision -- a vision from a different vantage point than that available to the individual administrator or teacher within a local school system. Supervision should place emphasis upon the encouragement of program evaluation and program improvement through positive policies, programs and procedures.

It is also the function of the State Education Department to provide leadership for the improvement of education through the development of research programs, consultative services, legislation, school district organization, fiscal integrity, teacher education, and teacher improvement.

The major functions of the State Department of Education in the area of research lies in:

A. Identification of problems for research
B. Motivation of research
C. Financing of research
D. Evaluation and synthesis of research
E. Dissemination of research

Another important role, and a legal role of the State Education Department, is that of inspection or regulation. Since the agency is responsible for the distribution of state and federal funds provided for all education, including vocational education, and since the sources of these funds often have restrictions or directions with regard to the accurate use of the funds for the purposes for which they are intended, it is necessary for the department of education to establish audit and special procedures to determine that standards established for the expenditure of these funds are followed in the schools who accept the funds.

Organization of State Departments of Education

A 1964 study of State Education Departments by Robert Will indicates many different organizational patterns exist within the 50 states. The study, however, suggests certain guidelines that can be followed in the development of a sound organizational pattern. These were suggested as follows:

1. Programs should be clearly identified in official department plans developed to substantiate budget requests and to justify expenditures subsequently made under the operating budget. Administrative programs are conceived by man; consequently, they must be officially identified in a manner that clearly reflects their purposes and objectives.

2. The responsibility for conducting each program thus identified should be delegated to a single administrator or program director.

3. Related programs should be grouped within formally structured divisions and subdivisions of the department to facilitate the functioning of internal government and the sharing of supporting services.

In spite of the diversity, certain common units of service can be identified for most departments. Most departments have a unit concerned with the allocation of funds made available from the state sources for assistance to the public schools of the state.

Another unit common to most states is that of certification. This unit has the responsibility of certificating or licensing teachers for employment in the public schools.

A third common unit is one responsible for determining that standards are met in the elementary and secondary schools in the state as established by state law or state board of education action.

Departments of education also have one or more divisions concerned with the administration of special program services such as special education, federal assistance, school construction, vocational rehabilitation, audio-visual aids for education school lunch, surplus property, and in every State, a Divsion of Vocational Education.

As indicated earlier in this report, a study by Beach in 1950 identified the unit administering vocational education and the unit administering vocational rehabilitation as the ones within the State Department of Education that had adequate staff, or fairly adequate staff, for the functions assigned to the division. The availability of categorical aid for these two areas of education and regulations of the categorical aid providing funds for administration and in many cases, teacher education, undoubtedly were the major factors in the size and quality of staff employed for these units.

Federal Aid For Education

Over the period of years, there has been a continuous opposition on the part of some educators to categorical aid from either the federal or state level. The Hoover Commission Report of 1949 encouraged the establishment of block grants rather than categorical aid. This report was viewed as a great victory which would establish a trend toward block grants.

Paul Mort and Walter Reusser, in their publication on public school finance made reference to the tremendous cost of equalization programs throughout the nation and of general aid to education. They suggested the battle was only a skirmish and later events have proved them to be correct.[5]

Mort and Reusser suggest that the function of federal aid may be to dramatize national interest in such matters as science, math, English, and work arts, leaving social studies and humanities to the state and local financing relieved by assistance in the other areas. While states and local communities have strongly encouraged the allocation of general aid funds to the public schools of the nation, Congress has continued to allocate funds for specific purposes to the states in relationship to an area of education.

As proposed changes are reviewed in legislation in Ohio, regarding the allocation of state funds, and as the growing unrest is noted among teachers for increased salaries, it may be that state aid to local schools may also take on some semblance of categorical aid.

In identifying some of the major federal acts providing categorical aid to the states for assistance in education, we must start with the Morrill Act, establishing the land grant colleges and the Smith, Lever Act, establishing agriculture extension programs. Perhaps the next great major federal act would be the Smith-Hughes Act of 1917 and subsequent acts providing additional money in updating the language of the Act, such as the George-Dean Act of 1936, the George-Barden Act of 1946 and the new Vocational Education Act of 1963. All of these vocational education acts provided funds, not only for reimbursement for the development and maintenance of programs within the local community, but also for ancillary services in terms of State supervision, teacher education, consultant services, etc.

The Vocational Education Act of 1963 specifically designated that three percent of the funds under the Act must be spent for ancillary services. The requirement that at least this amount of the funds be spent for ancillary services was undoubtedly based upon the concept that additional State leadership would be needed to implement the new provisions of the Act and increased emphasis placed on teacher education in order to supply the teachers necessary for a broadly expanded vocational education program.

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[5] Paul R. Mort and Walter C. Reusser, Public School Finance (New York: McGraw Hill Book Company, Inc., 1951)

The National Defense Education Act of 1958 provided additional federal dollars to the states for assistance with a number of areas of education, including guidance and counseling, science, math, research, etc. This Act, as in other federal acts, enabled states to add staff at the state level to assist with the administration of these new responsibilities under the National Defense Education Act. In many cases additional special service divisions were added to the State Education Departments for areas such as guidance and testing.

The Elementary and Secondary Education Act of 1965, by far the most massive and far-reaching Federal assistance program for education established by Congress to date, still provided money on a categorical basis and required the State to establish special service units or add personnel to existing units in order to administer the funds made available to the communities through the States. This Act, of course, also provided as a part of the Act, funds for the improvement of salary schedules within State Departments, as well as the addition of new personnel to the Departments. As departments of education grow and expand within the states, each existing unit or division and additional units and divisions considered must be evaluated in terms of the contribution they make to the educational program within the State and the relationship to the organization pattern of the State Education Department.

Functions of Vocational Education Units in State Departments of Education

One early question that might be asked is, "Should the unit administering the programs of vocational education be a separate special service unit or should it be a part of the unit for elementary and secondary education?" While vocational education operates at the secondary education level, it also functions at other levels. There are a number of factors characterizing the functions of the vocational education unit which suggest that it should be separate and apart from the Elementary and Secondary Education Division servicing the remainder of the school program. Some of the reasons for the maintenance of a separate unit or division for vocational education are as follows:

1. Vocational education is concerned with both youth and adults. It has a continuous relationship with the person from the time he enters his first vocational program through his preparatory training period,

through apprentice related instruction classes for those who enter apprenticeship, continuing with upgrading classes for employed workers, a concern for the person who becomes unemployed and must be retrained for employment, and a concern for the newest area of education, technical education, a two-year post-high school program leading to para-professional occupations. No other unit within the State Education Department has this breadth of concern in terms of the total active life of the people, or for the variety of educational services to both employed and unemployed workers.

2. Vocational education provides a program approach to education at both the high school and post-high school level, as compared with the subject-centered approach of the normal elementary and secondary school. The program approach is in a sense, a systems approach to education. The vocational program in which a student enrolls is concerned with integrating the skills, technical knowledge, work habits and attitudes, remedial education needs, and rehabilitation needs of youth, through a core program built around students' occupational choices. Vocational education, under the responsibilities assigned under the Vocational Education Act of 1963, is concerned with the total youth and with all levels of education except baccalaureate degree level education. This program approach, based upon the fact that the total youth is evaluated as he makes application for employment, is a responsibility assigned by the Vocational Education Act of 1963 to vocational education, and encourages a unique combination of services to youth and adults through the vocational education unit, very seldom considered by other units in the department.

3. The vocational education unit must maintain a viable relationship with industry and business, since this unit must prepare

students enrolled in their programs to be able to enter business and industry as advanced learners and to make progress in their chosen occupations. While vocational education makes a direct contribution to the general education needs of youth, in terms of work habits and attitudes, acceptance of responsibility, recognition of the rights of others, and citizenship training, it is measured each year on the basis of the placement of students in employment related directly to their occupational training. The development of general education values and the teaching of technical information become an integral part of the skills and knowledges which a student presents to an employer as his credentials for employment. Relationships with business and industry are maintained through state advisory committees and through interrelationships with business and industrial groups. The vocational education facet of the state education department is obligated to maintain such relationships.

4. The unit of vocational education in a State Department must develop and maintain relationships with various governmental agencies. Such agencies include the Bureau of Apprenticeship and Training, the State Employment Service, the Department of Welfare, the Department of Development, etc. While other units in the State Education Department maintain contacts with governmental agencies, their contacts are with a different set of agencies than those identified above for the vocational education unit.

5. Leadership must be provided to a number of public service areas through consultants employed directly by the unit of vocational education in the State Department of Education or by contract with universities. Some of the public service areas for which programs must be organized are: fire service training, emergency rescue squad training, law enforcement training, industrial leadership training, electrical

linemen training, practical nurse training, school bus training, etc.

6. Vocational education in the public schools of most states is elective in terms of the offerings in the schools. Vocational education exists in the school system only if the school system wishes to include it in its curriculum. A different approach must be made, therefore, in providing assistance to the schools for the development of vocational education programs. This condition places upon the unit for vocational education a unique function of encouraging the school systems to establish vocational education programs, rather than requiring the school systems to establish such programs.

7. The high cost of vocational education, in terms of building, equipment, and operation, encourages state and federal governments to provide funds to assist with a portion of these costs. The federal funds, and in most cases, the state funds, are provided to a unit within the State Education Department for the administration of these funds for the purpose identified under the appropriation measures. While the areas in which the funds can be used are identified and procedures required by law for the reporting of funds, including the matching by state and local funds, there is a wide latitude of decision making exercised by the person or unit in charge of allocating the vocational education funds. Priorities must be established, in terms of services to be provided to local communities, teacher education services to be provided to the universities, and administration and supervision personnel to be employed. Budgeting must be done which involves the allocation of funds between the various programs for youth and adults on the basis of both prior experience and changing needs in the world of work. This responsbility is different from that assigned to most other units within the State Education Department.

8. Vocational education programs are oriented to different levels of ability. Such an orientation is achieved not through the watering down of an individual program in existence, but through the development of a changed curriculum and program pattern to serve at different levels.

   For years, vocational education was proud to accept the responsibility for skilled level vocational training and post-high school technical education. It now is willing to accept the responsibility for an occupational level education for students in the 75-90 I.Q. range and other students who are achieving at less than their ability. Programs organized for this group will include a high number of economically and socially disadvantaged people. It should be pointed up, however, not all disadvantaged people are unable or unwilling to participate in education. Experiences to date indicate that vocational education can provide significant programs for students at the occupational level. Programs, however, must be organized in terms of the interest and ability of the students at this level, rather than assuming that they can "learn something" by being exposed along with others in a class planned for the skilled level student. This concern for the varying levels of ability, along with the broad age range and the variety of programs necessary to meet these varied needs places the unit for vocational education in a unique function as regards the services to the local communities.

9. The functions of the unit for vocational education within the department are set apart from other units in education on the basis that a state plan is written which provided for the agreement between the state and the U.S. Office of Education for the operation of vocational education programs to which federal funds are allocated. The organizational pattern established within the state may or may not follow the pattern suggested by the categorical aid provided states through the federal acts. The vocational education unit within the State Education

Department must maintain relationships with both the federal and local levels. The responsibility for development of new programs provides for a direct and continuous interaction between the unit for vocational education in a state department and the federal and local agencies.

10. The obligation for ancillary services, including the responsibility to determine that teacher education is provided in the field of vocational education, also sets the functions of this division apart from any of the other divisions within the State Education Department. Very often, there is a direct contractual relationship between the State Education Department and universities who agree to provide the type of vocational education needed by the various services within the Division of Vocational Education.

While few of the listed responsibilities and duties assigned to the unit for vocational education in the state education department are unique within themselves, the nature of the multiple relationships within the division does make it unique in terms of its function in the State Education Department. The uniqueness of the combination of responsibilities, plus the necessity for more rapid adjustment to changing needs in the world of work and the necessity for interaction with other units at the federal, state, and local levels concerned with education in general and vocational education in particular, make it desirable that the unit for vocational education within the State Department be identified as one of the major units within the Department.

Due to the nature of the responsibilities and duties as identified, the vocational education unit should have ready access to top administration and to the State Board for Vocational Education, established as a requirement under the Federal vocational education acts. More specifically the Division of Vocational Education must be able to get to top administration and to the State Board with policy problems and must have an opportunity to: (a) make adequate presentation, (b) obtain adequate consideration, and (c) receive a prompt response.

Pattern for Organization for Vocational Education

Throughout the Nation, there are a number of patterns of organization for the State Board for Vocational Education, required by the Federal vocational education acts. In most cases the state board for education concerned with elementary and secondary education has been assigned the responsibility to serve as a State Board for Vocational Education.

There are also patterns, however, such as the State Board for Vocational Education in Wisconsin, which is separate and apart from any other board of education in the State. This board of education has as its responsibility the area of vocational and technical education, primarily at the post-high school level. There are five States which have boards for vocational education separate from the boards for public education.

In a few cases, the functions of the State Board for Vocational Education have been assigned to a Board for Higher Education or to a board functioning between the High School Board of Education and the State Board for Higher Education.

As boards have been proliferated within the States, between elementary and secondary education, community colleges, and boards concerned with four-year colleges or universities, the problem of locating the board providing policies for vocational education has increased. This problem is due to the fact that vocational education is concerned, not only with the high school youth, but also the out-of-school youth and adults; not only with the skilled level vocational training at the high school level, but also two-year post-high school training leading to para-professional occupations, and often the associate degree, which area often comes into focus with the field of higher education.

To the extent that there is a proliferation of boards of education within a state concerned with the total educational program, the problems of the administration of vocational education are compounded. There seems to be a trend toward the proliferation of separate boards for various types of education within the state, leading to a competition for students' prestige and money.

Organization of Vocational Education Units in State Departments of Education

In reviewing the relationship of the Division of Vocational Education within the State Education Department, it was stated earlier that the Division of Vocational Education, because of its unique responsibilities, needs to have a close relationship with the top administration in order to obtain prompt policy decisions on problems raised by changing conditions. Where there is a separate Department for Vocational Education, such as under the separate Board for Vocational Education in Wisconsin, there is no problem, since the Director for Vocational Education, or whatever title is used, consults directly with the State Board for Vocational Education and then administers the policy.

In a state where the person responsible for directing vocational education is within the State Education Department, but a separate board of education has been appointed for vocational education, there is again a direct relationship between the organization responsible for vocational education and the policy-making group identified as the board. Essentially, however, this organization becomes a unit separate and apart from the rest of the department, due to the special relationship with the separate board of education.

Since both of the above types of relationships are the less common ones, it is suggested that we look into the more common relationship where the unit for vocational eduation is integrated into the State Education Department with a common board for the total education program, including vocational education. This arrangement serves the function of integrating vocational education into the program of control for all education, but may not be as flexible as the organization of a separate board.

The key factors in any organizational pattern within a department of education is for the Director of Vocational Education to be able to get consideration of issues by the top administration and to be in such a position as to have authority to act within that policy in order to meet the changing nature of problems affecting the preparation for the world of work. Such problems include the administration of funds made available from state and federal sources for the expansion and improvement of vocational education services and the recruitment and training of the staff necessary to carry out the responsibilities of the vocational unit. As indicated, the person responsible for vocational education should be directly under the Superintendent of Instruction or responsible for several areas of special services.

It is suggested that the nature and scope of the vocational program and the variety of responsibilities of the unit indicate that the person responsible for vocational education should not be more than one person away from the Superintendent of Public Instruction so far as administrative structure is concerned.

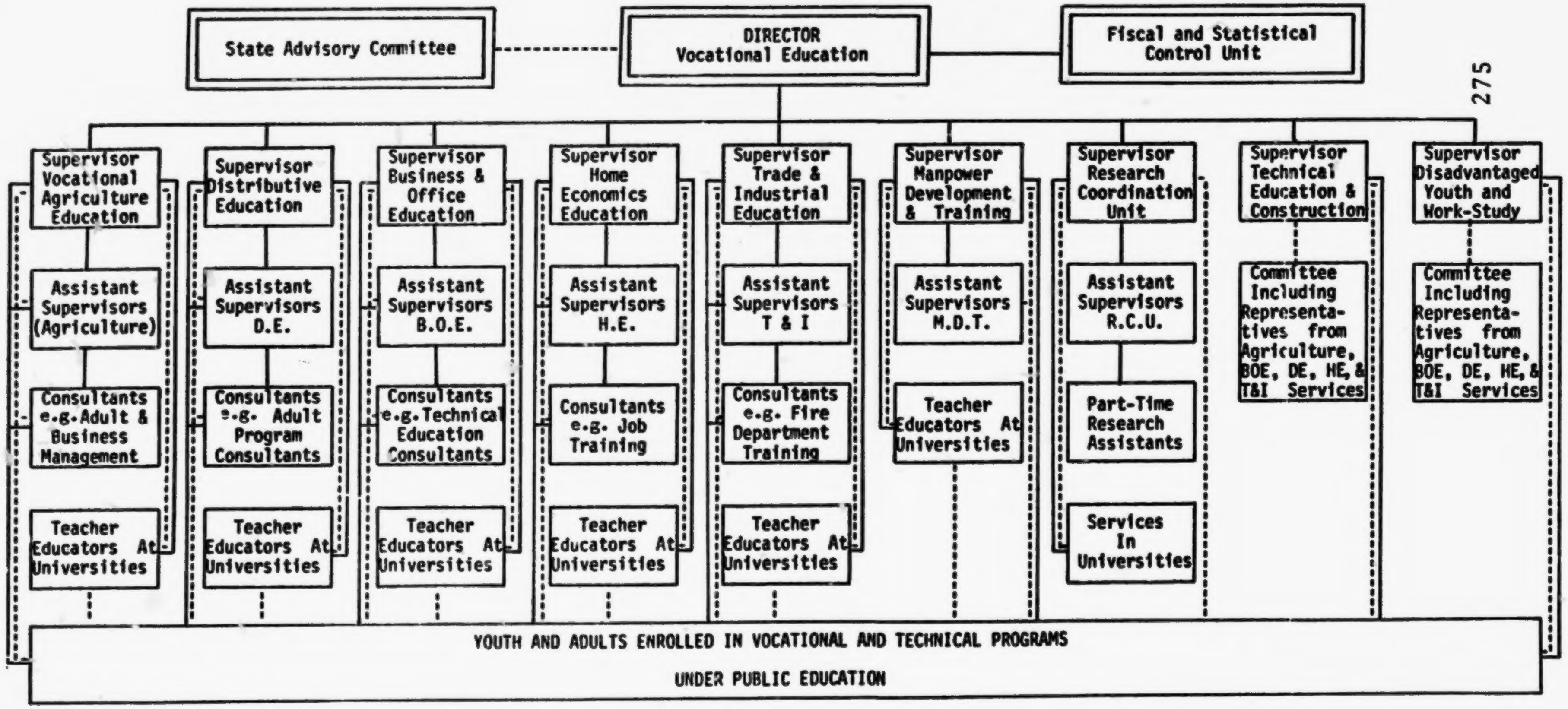
Looking at the organization for a unit of vocational education, we find that throughout the Nation, two basic methods are being used to structure such divisions. Divisions of Vocational Education can be structured basically by the more traditional vocational services, putting major emphasis in terms of personnel grouping on the recognized areas of agriculture, business and office, distribution, trade and industrial education, and homemaking, with health service being recognized as a separate unit in some States. A division organized under this pattern needs to supplement the supervisory level functions by the addition of supervisors in major areas identified in the Vocational Education Act of 1963. Such additional supervisory level personnel would include: research, construction, technical education, disadvantaged youth, work-study, and manpower development and training. These supplementary service units may be headed by a separate supervisor, or based on the size of the State, one or more of the functions might be combined under one supervisor.

It would be possible to provide a separate staff for each of these supplementary service units or to function on a committee basis with a person from each of the occupationally oriented vocational education services, in order to provide an integration of these activities into the functions of the services and to prevent the duplication of personnel and competition between separate service units. This pattern of organization is functioning satisfactorily in Ohio, with the supervisors of each of the vocational education services, both the occupational and supplementary service units, being capable of and assigned responsibilities for the development of total vocational education programs as well as leadership or their own individual service.

Within the added supplementary service sections in the unit for vocational education in Ohio, only the Manpower Development and Training Service was assigned separate full-time staff because of the nature of the operation of that unit.

(CHART A)

ORGANIZATION FOR VOCATIONAL EDUCATION WITHIN THE STATE DEPARTMENT OF EDUCATION BASED ON ORGANIZATION BY OCCUPATION


State Advisory Committee
DIRECTOR Vocational Education
Fiscal and Statistical Control Unit
Supervisor Vocational Agriculture Education
Assistant Supervisors (Agriculture)
Consultants e.g. Adult & Business Management
Teacher Educators At Universities
Supervisor Distributive Education
Assistant Supervisors D.E.
Consultants e.g. Adult Program Consultants
Teacher Educators At Universities
Supervisor Business & Office Education
Assistant Supervisors B.O.E.
Consultants e.g. Technical Education Consultants
Teacher Educators At Universities
Supervisor Home Economics Education
Assistant Supervisors H.E.
Consultants e.g. Job Training
Teacher Educators At Universities
Supervisor Trade & Industrial Education
Assistant Supervisors T & I
Consultants e.g. Fire Department Training
Teacher Educators At Universities
Supervisor Manpower Development & Training
Assistant Supervisors M.D.T.
Teacher Educators At Universities
Supervisor Research Coordination Unit
Assistant Supervisors R.C.U.
Part-Time Research Assistants
Services In Universities
Supervisor Technical Education & Construction
Committee Including Representa-tives from Agriculture, BOE, DE, HE, & T&I Services
Supervisor Disadvantaged Youth and Work-Study
Committee Including Representa-tives from Agriculture, BOE, DE, HE, & T&I Services
YOUTH AND ADULTS ENROLLED IN VOCATIONAL AND TECHNICAL PROGRAMS
UNDER PUBLIC EDUCATION

——— Line of direct responsibility and supervision. ---------- Line of assistance and consultation.

Assistant Directors can be used to reduce the number of persons reporting directly to the State Director of Vocational Education.

It is believed that this pattern of organization provides for continuity of service to youth in each broad area of employment, such as distribution, from their initial contact with the service in a preparatory vocational and technical program, on through initial employment, upgrading and retraining. This pattern enables each service unit to organize advisory committees in such a manner as to be concerned with all levels of training in that broad area of employment, thus providing just one contact with that group in labor and management, rather than a multiple contact for various purposes, such as high school, post-high schoo, etc.

Perhaps the major value of this organizational pattern, however, is the contribution that it makes to innovation and change within vocational educa--tion areas. People working in the occupational categories with youth from preemployment vocational and technical training, at the high school or post-high school level, through both retraining and upgrading programs beyond high school, keep in close touch with the changing needs in industry and business, and through their broad perspective of the world of work are better able to make changes and adjustments in program development.

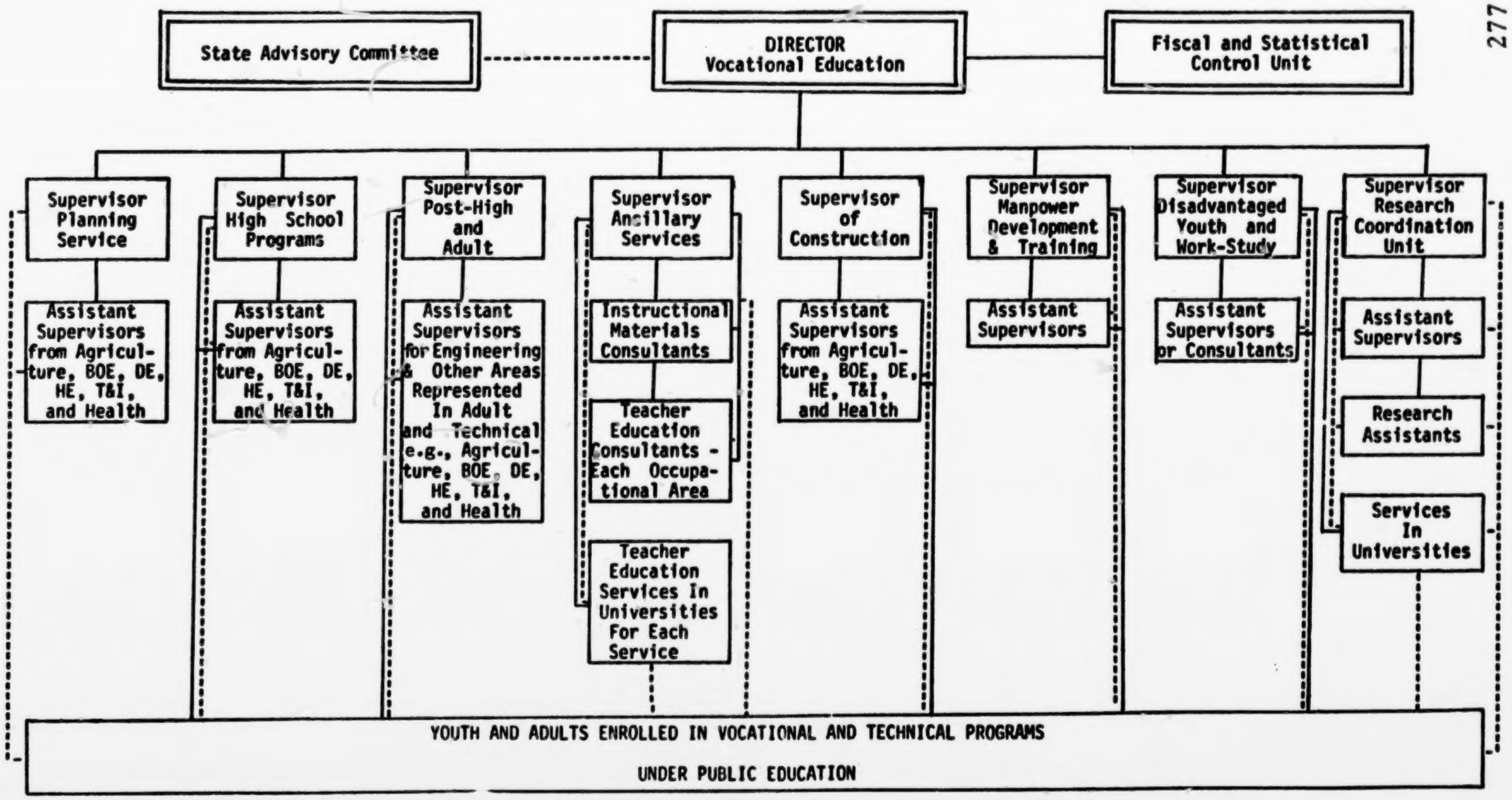
It is believed this pattern also saves on duplication of staff, since the leadership role is provided by the addition of supervisory personnel for the additional responsibilities assigned under the Vocational Education Act of 1963, but makes use of committees cutting across the occupationally organized services.

A possible weakness for this organization would be the development of occupational units which did not integrate themselves into a total vocational education unit. This problem, the need to cut across unit or service lines, can be overcome and in Ohio has been overcome by effective organizational efforts on the part of the person responsible for the direction of the unit for vocational education.

Another approach is to organize the unit for vocational education on the basis of purposes established under the Vocational Education Act of 1963. Under this approach, there might be a service for high school programs, another service for post-high school technical, another service for programs for disadvantaged youth, another service for construction, another service for ancillary services, perhaps a service for manpower development and training, or a combination of several of these under assistant directors, with supervisors at the head of the various units

(CHART B)

ORGANIZATION FOR VOCATIONAL EDUCATION WITHIN THE STATE DEPARTMENT OF EDUCATION BASED ON ORGANIZATION BY PURPOSE


State Advisory Committee
DIRECTOR Vocational Education
Fiscal and Statistical Control Unit
Supervisor Planning Service
Assistant Supervisors from Agriculture, BOE, DE, HE, T&I, and Health
Supervisor High School Programs
Assistant Supervisors from Agriculture, BOE, DE, HE, T&I, and Health
Supervisor Post-High and Adult
Assistant Supervisors for Engineering & Other Areas Represented In Adult and Technical e.g., Agriculture, BOE, DE, HE, T&I, and Health
Supervisor Ancillary Services
Instructional Materials Consultants
Teacher Education Consultants - Each Occupational Area
Teacher Education Services In Universities For Each Service
Supervisor of Construction
Assistant Supervisors from Agriculture, BOE, DE, HE, T&I, and Health
Supervisor Manpower Development & Training
Assistant Supervisors
Supervisor Disadvantaged Youth and Work-Study
Assistant Supervisors or Consultants
Supervisor Research Coordination Unit
Assistant Supervisors
Research Assistants
Services In Universities
YOUTH AND ADULTS ENROLLED IN VOCATIONAL AND TECHNICAL PROGRAMS
UNDER PUBLIC EDUCATION

________ Line of direct responsibility and supervision. ---------- Line of assistance and consultation.

Assistant Directors can be used to reduce the number of persons reporting directly to the State Director of Vocational Education.

This pattern of organization, while assuring attention to each of the purposes under the Vocational Education Act of 1963, also may tend to provide for a questionable division of services to people based on their age level rather than upon their chosen broad field of work. It will tend to prevent development of continuing and close ties on a service relationship in such broad occupational categories as agriculture, home economics, trade and industrial education, etc. with the employer and employee organizations or groups, since the units organized by purpose will tend to be concerned about a segment of the preparation for the world of work rather than a continual service to people throughout their life of employment. The pattern may stimulate planning, but may tend to diminish implementation on new programs or processes because of a limited scope of responsibility and vision. Such a pattern of organization also may tend to proliferate staff personnel and overlap responsibilities.

Summary

1. The long history of vocational education in relationship to Federal assistance has over the years provided for units within State Departments, better financed and staffed than other units within the State Departments of Education.

2. Units for the administration of vocational education have been most generally attached to the board within the State responsible for the administration of public education rather than following an organizational pattern providing for a separate Board of Vocational Education.

3. The functions of the vocational unit within a State Department of Education is of such a unique nature as to suggest this unit be a separate division within the Department rather than in combination with some other division, such as the division for elementary and secondary education.

4. The division for vocational education must be placed in the organizational pattern in such a manner as to have access to prompt decisions and policy making, both on the

the part of the State Board of Education and the State Superintendent of Public Instruction.

5. While the Division of Vocational Education can be structured as to purpose, or as to broad areas of occupations within the world of work, successful services to persons enrolled might best be served by the organizational areas in the world of work.

PART II

CHAPTER XI

THE EMERGING ROLE OF THE STATE DEPARTMENT OF EDUCATION

Roald F. Campbell* and Gerald E. Sroufe**

In this article the authors explore the implications the impinging social forces hold for state departments of education. They point out some of the necessary developments the state departments of education must incorporate (e.g., alter present operational responsibilities, modification of existing relationships with federal government) as well as outlining possible interim steps state departments of education may take (e.g., analyses of SDE programs, promote change and innovation, great use of consultants, a mechanism for exchanging information among the states).

For education, change is the imperative of the age. One cannot readily bring to mind a time in our history when the technical, social, political, and economic forces have had such import for change in education. The background papers developed for this Conference treat many of these forces.

None of our traditional and justifiably cherished educational institutions have yet come fully to terms with the challenges presented by these influences. Some contend that state departments of education (SDE) may have accounted themselves even less well than other institutions in adapting to new responsibilities. To borrow from Nyquist, SDE are in danger of becoming second-rate. They surely will become second-rate if they do not respond constructively, and substantively, to those forces with which the educational enterprise is presently grappling and if they cannot provide leadership to other educational institutions seeking to respond effectively to these forces. We do make the assumption that we need to retain some kind of state education agency.

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In this synthesis paper we have sought to provide an overview of the major forces impinging upon SDE, drawing heavily upon the background papers, but from other sources as well. Next, we have attempted to examine the implications of these forces through focusing upon the program, personnel, and resource dimensions of SDE. Further, we have tried to suggest some interim steps which might be useful in considering how SDE can move from their present role to one more in keeping with that which we have envisioned.

Forces Impinging Upon State Departments of Education

An understanding of the developing role for SDE must take into account the overly-familiar observation that Americans hold increasing expectations for public education. In sharp contrast to the situation when SDE were originally established, education is now a high priority national concern and a high priority state concern. That great expectations are held for education is reflected in the observation that education has become a foremost political issue at all levels of government; educational policies are increasingly formulated or modified in the classical political arenas rather than in the office of the superintendent of schools. It is now popularly believed, again in contrast to the situation when SDE began, that most social, economic, and political problems are at least partially amenable to programs of public education. McLoone (p. 11)[1] contends that, "The purposes of education were left to the educators until recently. Now almost every group in society has some end that education should serve." We are not certain of his first point but we have no doubt about his second. Clearly, SDE must come to terms with the magnitude and nature of expectations held for education today if they are to provide effective educational leadership within their respective states.

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[1] Background papers are referred to in this manner.

The increased federal role in education is one consequence of the increased expectations for education. The growth of the budget of the United States Office of Education from 700 million in 1962 to 3 billion in 1966--and 3.9 billion in 1967--is eloquent testimony that for contemporary Presidents, education is "the first work of our times." Masters (p. 2) calls our attention to the fact that not only has the amount of federal funds for education greatly increased, but that their impact has shifted from marginal educational concerns, such as the school lunch programs, to support for the basic educational components, such as books, materials, and teachers' salaries.

In our concern to identify forces impinging upon state departments of education, three aspects of the increased federal role in education merit special attention. The first is that the federal impact has long been more extensive upon state education agencies than upon local systems. To a large extent, federal funds have determined the agendas of state education agencies. That is, the availability of federal funds has determined what programs would be undertaken by the state departments of education. An examination of functions currently performed by state education agencies suggests that more than fifty per cent of their personnel is working in federally supported programs. Further, the availability of federal funds seems to be consequential in determining the number of individuals assigned to any program even if it be peripheral. We regard the federal impact upon state departments of education as dysfunctional when, for example, vocational rehabilitation becomes a central function of a state educational program.

A second area of concern pertains to the administration of federal funds. Masters (p. 21) points out that the administrative machinery in many state departments of education may be inadequate for dealing with greatly expanded federal monetary inputs, and that state education agencies may be bypassed for this reason. Title III of ESEA, in marked contrast to the familiar provisions of NDEA, provides one model for bypassing state educational machinery and dealing directly with the needs of local systems. Federal-state relations in this area are yet to be resolved.

Regional laboratories, a manifestation of an educational policy formulated in the Congress and supported exclusively with federal funds present especially interesting questions with regard to the emerging role of state departments of education. Ianni (p. 44) sees the regional laboratories as filling a role which neither state departments, universities, nor local systems have been able to perform: the initiation and development of creative programs. Ianni suggests that state departments of education can be the mechanism through which innovative programs are implemented in the local school systems. While the role of and even the number of the regional laboratories is still being seriously considered, what seems most important to recognize at the moment is the emergence of a new kind of educational institution, one which may perform some of the functions customarily attributed to state departments of education. However, as Nyquist points out (p. 6) the emerging patterns may emphasize interdependence rather than independence. With Nyquist, we think that new federal and private institutions require that state departments of education examine anew their role in the educational enterprise.

Hauser's reference to the present decade as one characterized by "suburban boom and central city bust" (p. 22) identifies cryptically an important problem confronting educators and state educational agencies. Though demographic phenomena such as increased longevity and the population explosion present major educational problems, urbanization and suburbanization represent the greatest educational challenges today. And it appears that the rural traditions of state departments of education, as well as the rural orientation of their personnel, make them ill prepared to deal effectively with either urban or suburban educational problems.

In our cities as noted by Hess (p. 4): "There are social, cultural, and economic circumstances which act systematically (that is, predictably and consistently) to prevent children in certain places and with certain characteristics from obtaining an adequate education, income, and dignity." Some investigators believe that culturally disadvantaged students in the central city have only one chance in 1000 to acquire effective learning habits barring special compensatory education programs. Our concern to equalize the educational opportunity of culturally disadvantaged urban children has fostered a dramatic re-examination of the familiar areas of curriculum, materials, methodology, teache preparation, and administration of schools. If state departments of education are to have a responsible role in meeting the needs of our inner cities they, like the rest of us, will be called upon to provide educational programs that are relevant not merely traditional.

A new dimension has been added lately to our efforts to provide equal educational opportunity for inner-city children. Coleman's[2] mammoth study for the Office of Education suggests that the traditional educational inputs are of less importance in providing educational opportunity for the disadvantaged than is their attendance in classrooms of heterogeneous socio-economic composition. That is to say, the students are more important in providing opportunity for success than the teachers or materials. Should further investigation substantiate this pioneering effort, should Moynihan be correct in his assertion before the Kennedy-Javits "Seminar" on urban problems that doubling or redoubling educational expenditures won't make any difference, what role might state departments of education assume in insuring equal educational opportunity for students within their states?

Suburban education provides equally challenging and equally complex problems for state departments of education. Many of these suburban districts are peopled with high-salaried executives who demand the best for their children. How is a state department of education to relate to a "lighthouse" school district which maintains superior personnel? Should state departments simply ignore such systems? Or should they seek to utilize them? Are new mechanisms required for effectively relating to such districts?

Educators have generally viewed education as an unqualified good. We have given little consideration to the relative costs and benefits of formal education as opposed to other methods of "education." Today we must recognize a demand for increased rationality in the total educational enterprise. The demand for increased rationality

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[2] James S. Coleman *et al*. *Equality of Educational Opportunity*. Superintendent of Documents Catalogue No. FS 5.238:38001, (Washington, D. C.: U. S. Government
Washington, D.C.
Printing Office).

(i.e., accountability in the sense of both economic efficiency and systems analysis) stem logically from increased expenditures and increased expectations for education.

Though we are considering a single phenomenon, it is useful to discuss it on two levels. The papers of McLoone and Lecht are excellent illustrations of the demand for rationality in education at the global level. Society, whether defined in terms of the nation, state, or local political system, has goals for which it allocates its always scarce resources. Generally, this process is intuitive, but now such decisions are being influenced by application of analytic tools such as the program-planning-budgeting system described by McLoone. We may suggest that never before have decision makers examined the relative costs of education in terms of the specific social or economic goals sought. Once goals to be achieved have been specified for the relevant society, projection techniques such as those ably demonstrated by McLoone, Hauser, and Lecht become important tools in determining the nature and cost of feasible programs.

At a less global, but equally important level, educators have increasingly focused upon the relationship between educational inputs and outputs. School board members and others, including professional educators, have been asking "why?" Why one curriculum over another? Why one kind of technical equipment over another? Only within the last decade have serious attempts been made to use correlational techniques to determine which educational inputs have greatest effect upon students' achievement.

It appears obvious to us that something very like the program-planning-budgeting system will be required by governors and other central decision makers as they develop their budgets, and that state departments of education will have great responsibility for working with them in this effort. In this connection there appears to be great variation among state department leaders today. While in some states there is heightened interest in statewide evaluation; in others no such interest is manifest.

An additional force impinging upon education, and the last to be considered here, is that which has been termed the technological revolution.

Suppes, in a recent article, summarizes both our technology-free past and our technology-filled future in one brief passage:

> If you look at education as an industry over the last sixty years and compare it with the steel industry, the automobile industry, any other major industry in this country, the percentage of the investment in capital equipment as compared to salaries is reversed in education (in comparison) to the national trend in all other major industries. I think we can anticipate that with (changing) technology there will be a trend comparable to that in other major industries: namely, a significantly bigger percentage of total expenditures will be devoted to capital equipment and to the implementation of technology.[3]

There seems to be little question that the technological revolution in education is upon us. Our largest electronic, publishing, and communications firms have been merging at a dizzy pace in order to gain their share of the anticipated market. Minnesota Mining and Manufacturing Company has joined Newsweek, the Columbia Broadcasting System is now associated with Creative Playthings, and International Business Machines has purchased Science Research Associates, to name only a few of the industrial giants emerging as major developers of educational machines.

The potential of computer-assisted instructions is hardly at question here. We agree with Springer,[4] himself a manager of educational systems implementation for the General Learning Corporation, that the computer can play a vital role in the administration of education, in educational research, in storage of "libraries" of information, and in substantially enhancing the learning process. Obviously, computers and other hardware necessary to achieve these objectives will cost a great deal. Ianni's (p. 18) lament that 200 million dollars worth of hardware--"mostly junk"--was purchased under Title I of ESEA may not remain a major concern.

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[3] Patrick Suppes, "The Computer and Excellence," Saturday Review, 50 (January 14, 1967), 48.

[4] C. H. Springer, "The Systems Approach," Saturday Review, 50 (January 14, 1967), 56-58.

Even more critical than expenditures alone, will be the making of policy decisions required for the purchase of complete educational systems geared to the new hardware. Such systems will include the software--exercises, teacher guides, tests--for edccational systems, not for just one subject in a given grade level, but quite possibly encompassing all grade levels and all subjects. The decision to purchase a general educational system will necessarily be a centralized decision and for centralized decisions we share the concern of the congressional subcommittee of the Joint Economic Committee (August, 1966, p. 11):

> Options for change must be held open. It would be tragic if control of curriculum and the content of courses were to pass by default into the hands of large corporate producers in the "hardware" and "software" end of the business. Teaching aids and devices should be developed to meet explicit educational objectives and needs, rather than to broaden markets for particular products.

If computer-assisted instruction and other technical devices hold new roles for the classroom teacher and the school administrator, what is the place of the state educational agency in helping teachers, administrators, and educational specialists get ready to assume their new roles?

Implications for State Departments of Education

We have noted that a number of forces--increasing expectations for education, an expanded federal role in education, growing metropolitanism, demand for more rationality in education, and advancing technology--pose new problems for state departments of education. We now turn to some of the implications these forces suggest for the emerging role of the state department of education.

Educational responsibility in our system is a shared responsibility, and the term partnership seems appropriate. Not only is the responsibility for education shared among the three major governmental levels, but it is shared also among universities, regional laboratories, private foundations, industry, accrediting associations, and professional organizations. The nature of our total educational system is such that although many perform important functions, none of the partners can perform his role independently of others in the system. Further, the network of relationships constituting the system is a dynamic one, always changing, and one in which there is ultimately no claim upon any "sphere" of responsibility other than a pragmatic one. That is, functions performed by any partner or group of partners should be both necessary to the total system and performed more effectively than possible by any other partner or group of partners.

We are suggesting here the concept of a total educational system comprised of many partners each performing necessary roles. This concept is closely related to McLoone's idea of substitute means for achieving educational goals. The system may be considered to be functioning inefficiently if any partner is performing functions better performed by others, or not performing those functions for which he is uniquely situated. Although there is competition in the system (e,g., the struggle between private consulting firms and university survey agencies), there is also effective division of labor (e.g. SDE have virtually exclusive responsibility for teacher accreditation, the federal government for civil rights enforcement, and universities for educational research).

This overly-simple discussion of the notion of an educational system may be helpful in providing an explanation for the basis of negative comments expressed in regard to SDE by several of the background papers, and we think it provides a rationale for discussing an "emerging role" for SDE. We speak of total educational system in social, cultural, economic, and political terms and we are less concerned, at the moment, with legal jurisdictions.[5] The critical

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[5] The concept of a social system is amplified by R. L. Johns, (continued next page)

question which must be asked of each partner in the educational system is whether or not he is generally performing those necessary activities that he can perform best and if he is doing so in a satisfactory manner. Ianni, Masters, and Nyquist offer criticisms indicating that in some respects SDE are performing the wrong tasks or are performing the proper tasks improperly. These are valid criticisms in the context of an educational system.

In seeking to describe aspects of the emerging role of SDE we have tried to keep in mind the question of substitutability. Further, as we are dealing with a dynamic system, we have sought to consider the implementation upon the traditional allocation of responsibility within the system.

Obviously, in describing an emerging role for SDE we can be only suggestive. As Iannaccone indicates, because of their diversity, no one can develop a description or blueprint suitable for all SDE. What we have tried to do is provide sufficient examples in each of three broad areas --programs, personnel, and resources--to illustrate generally what we ascribe to be the role of SDE in the light of the numerous forces impinging upon the total educational system.

Programs and Procedures

What modifications in the programs and procedures of SDE are suggested by the new forces impinging upon education? A cardinal consideration is that most departments are in critical need of serious and sophisticated planning and development efforts. McLoone and Lecht have illustrated the kind of planning that is required and have suggested some of the techniques to be utilized, but it remains for departments to create planning and development units capable of identifying goals, facilitating the process of establishing priorities, and seeing that programs are developed and implemented to achieve the state's goals. Adoption

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"State Organization and Responsibilities for Education." In Edgar L. Morphet and Charles O. Ryan, Implications for Education of Prospective Changes in Society. Denver, Colorado: Designing Education for the Future, 1967, pp. 245-267.

of such an approach will command new information inputs and, consequently, a new emphasis upon procedures will also require that SDE jettison the "great man" tradition of leadership and provide their chief state school officers with adequate and appropriate staffs. Attention to goals and priorities of a state educational program will require also better means of enlisting the support of the legislature, a topic we discuss later.

If we accept for the moment the assertion that states will respond to the demand for increased rationality with a new emphasis upon planning and development, two major consequences appear likely. First, such procedures will suggest that SDE seek to divorce themselves from some of their present operational responsibilities (e.g., schools for the handicapped, surplus property programs, perhaps even vocational rehabilitation). Such programs interfere with efficient use of personnel and resources which ought to be devoted to responsibilities more appropriate to SDE because of their unique situation within the educational system. Personnel and resources allocated to operational programs are frozen and may not be put to use readily to meet other needs. Further, having a large proportion of the departments' professional personnel and operating budget devoted to such autonomous divisions renders development of a sense of mission for SDE virtually impossible.

An additional development resulting from the concept of a total system may be the modification of existing relationships with the federal government. There are no reasons for states to be merely passive recipients of federal programs. SDE can be effectively involved in the policy decisions of the federal government through active participation in legislative and administrative hearings if they have suitable personnel to participate in such hearings. Nor is there any reason that SDE cannot take an active role in initiating federal legislation. Legislative ideas must begin somewhere and SDE can command considerable political support for sound ideas if they choose to do so. Further, SDE possessing plans for education within their states can utilize existing federal funds creatively to meet the needs of their states. A few states have found that they can exercise considerable influence over the nature of Title III programs funded in their states, even though the enacting legislation provides them with a "review" role only.

We agree with Nyquist (pp. 4,5) when he states that SDE must establish new and creative relationships with many other agencies. These new relationships are obviously needed at the vertical level--e.g., local school districts and federal agencies. They are also needed at the horizontal level--e.g., health, welfare, and labor departments. To be a completely autonomous educational institution is to be irrelevant. Such autonomy may contribute to the irrational allocation of our vocational education funds. In an effort to redress such allocations, one SDE has recently established a position of vocational needs analyst, and this person seeks to articulate the vocational education program of the state with the manpower needs of the state, the latter being determined by the state labor department. We anticipate that liaison positions of this type will become increasingly common.

In maintaining that SDE should eliminate some of their present responsibilities while simultaneously establishing more positive relationships with other agencies, we have merely suggested that departments which employ planning and development will gain a sense of direction and are likely to be dissatisfied with some of their existing functions and relationships. Other functions than those suggested here will be scrutinized; past relationships with all partners may also be subject to question. Some of the new relationships likely to be established with local school systems and universities are considered later.

In addition to redefining criteria of program appropriateness and relationships with other agencies and institutions, the concept of a total system may result in modification of some implementing procedures. Consideration of the goals behind provisions for subject-matter specialists and administrative consultants, both operating primarily through on-site visitation, might encourage alternative approaches. For example, the use of demonstration centers and in-service programs may prove to be more efficient means to accomplish the educational goals involved. The use of demonstration centers might provide SDE an opportunity to offer meaningful service to wealthy-suburban districts and to inner-city districts and at the same time make use of the resources in those districts. The example of an exemplary school in the inner-city, under the leadership and support of a SDE and in cooperation with the city district, could provide a service not now available.

Similarly, we anticipate that consideration of the means likely to achieve a given end most efficiently would result in the elimination of routine teacher certification procedures--that SDE would move from consideration of college transcripts to consideration of college teacher education programs. We also anticipate that a total system approach to school accreditation would reveal the shortcoming of perfunctory annual visits to schools. Such visits might be replaced with less frequent but more penetrating studies or surveys which would involve board members, teachers, administrators, and perhaps even students.

We are aware that many SDE are following some of the practices suggested here. Nyquist describes a number of such activities in his state. We know of other states in which attention has been given to the use of demonstration centers, in which the school visitation has become an in-depth evaluation of the total educational program conducted by special teams at three-year intervals, and in which the computer is used to check transcripts while the professional personnel work with teachers' colleges to plan improved teacher education programs. However, we suspect that such activities as these are isolated and atypical activities, rather than systematic, integrated modifications of programs based upon adequate planning procedures.

SDE are being pressed to provide new programs to meet forces impinging upon education. One such function is that of research and dissemination, a function which SDE can perform with special effectiveness. What is required is not a large staff to perform basic research, but a few extremely able persons skilled at identifying and articulating research and development problems existing within the state. This small and select group could be responsible for contracting with other agencies for research and development, for monitoring the projects, and for insuring that the results are presented in useable form and disseminated appropriately. Nyquist presents an example of a SDE establishing an association of educational researchers. Such a plan would clearly be in keeping with the role we are suggesting for the states in the area of research and development.

The area of urban services is one of almost unlimited challenge for SDE. Local systems are in need of assistance in resolving negotiation disputes, and professional organizations are in this instance part of the problem rather than an alternative agency which might fulfill this responsibility. Although the plight of the culturally disadvantaged is not only the responsibility of the state, states can do much to determine the fate of such pupils and must be attuned to the problem of the inner-city. To cite one example, the SDE ought to be instrumental in securing greater legislative support for urban educational programs.

We do not follow Masters entirely in this area. We question that granting urban areas greater policy autonomy than other school systems is necessarily an indication of weakness on the part of the SDE. Instead, such a practice may reflect the department's appreciation that it can offer little direct assistance in some areas, and that it should provide the local system with leeway to seek assistance where available, and to carry out the necessary program unhampered by restrictions set up by the state.

SDE may assume new or greater responsibility in several other areas. Legal services which permit local school systems to receive informed opinion "before the fact" would be of great value. Consultants to advise local districts regarding the purchase and use of educational technology are needed now and will be increasingly essential in the future. Also, assistance to local systems seeking to utilize the federal government's growing financial contribution may be provided. The Title III experience has revealed that generally school systems do not have available staff members capable of preparing acceptable proposals. More significant than simply helping school systems "win" grants, however, will be the states' role in assisting them in the initial steps of developing effective programs which are also suitable for federal funding. If SDE wish to make full use of federal funds to implement local and state programs they must give some help in the preparation of grant requests. SDE will be unable to exercise influence over local systems' use of federal funds if they perform only as administrative-brokers in the funding process.

We have emphasized here the so-called leadership activities--planning, research, demonstration, communication--more than the so-called regulatory activities. But we do not wish to denigrate regulation. State departments must regulate; not every locality should be free to be as bad as it wants to be. Even in regulation, however, there can be leadership in establishing defensible standards and enlightened procedures.

Personnel Needs

There is great homogeneity within the staffs of SDE. Departments tend to recruit persons with long experience in public school teaching and administration, persons whose own education was obtained at the state teachers college and/or the state university, and persons with rural backgrounds who have lived their lives in the state in which they serve. It has been pointed out that SDE are well staffed to operate a local school system but not very well staffed to provide leadership to a state educational system. For instance, they have few specialists in planning research, technology, teacher negotiations or civil rights. Relying upon educational experience as the criterion for employment, and recruiting through an acquaintance system which is in essence a closed system makes it unlikely that SDE will recruit a range of persons with all the skills necessary to meet effectively the demands now made of them.

It seems clear that if SDE are to recruit the personnel they will need for meeting their new demands, they must drastically modify their personnel policies. We think that they will find it necessary to cross state boundaries, and to look to industry, the universities, and special manpower pools such as research firms, for technical personnel. State departments may find it desirable to appoint some staff members for short periods and for specific tasks. To play an effective role in urban education state departments may find it necessary to seek qualified persons from minority groups, particularly to deal with questions of civil rights and the culturally disadvantaged.

Given the emerging role we have ascribed for SDE, personnel needs assume critical dimensions.

It may be much easier for states to restructure some of their traditional programs and procedures than to find the personnel necessary to implement the new or modified programs. We have suggested some interim steps which might be helpful in alleviating the personnel problem later but there is no easy solution.

Resources and Mandate

Imaginative use of federal funds will help meet the financial requirements of SDE, but they will continue to depend upon the state legislatures for the larger portion of their funds, and for their legal authority. Masters (p. 9) states that SDE have little voice in budget preparation and generally do not have an effective mechanism for making their needs and/or recommendations known to state legislatures. Legislatures can more readily accommodate the needs of special interest groups, such as state teachers associations, than the comprehensive programs presented by SDE. Further, in accepting the mythology that education is non-political, state departments are doubly handicapped in seeking to deal with the legislature; the legislature often views political activity as inappropriate for the SDE, the SDE itself has no clear rationale for the assumption of a political role, and, partly as a consequence, has little staff appropriate to the performance of such a role.

Not only are SDE hampered in presenting their program before the legislative body, but they have no immediate clientele to do battle for them. Although SDE may influence the education of every child in their states, their role may not be visible to the parents of the children. Professional associations are of limited help because almost by definition they are interested in only a narrow range of legislation, often competitive with the needs of the SDE. School districts, jealous of their local prerogatives, may actually prefer weak state departments.

Iannaccone (pp. 5,6) suggests that the reapportionment of state legislatures will result in the weakening of state based professional organizations. Although he does not mention the role of SDE in his discussion of the government of education at the state level--seemingly a significant omission--it may be that the weakening of the traditional educational influence groups will provide new opportunity for SDE to gain a voice in the legislative process.

At a recent conference for state legislators a special panel developed recommendations for increasing the effectiveness of pro-education legislators. It was the opinion of five of the six legislators serving on the panel, each from a different state, that their SDE were not to be trusted, that they represented only one more self-serving interest group. The membership of this particular panel may have been peculiarly biased, but we may be certain that unless SDE are perceived to be the state educational agency which provides an educational program for the entire state, that appropriations to SDE will be niggardly and their legislative mandate limited and restricted.

We have no ready recommendations for providing SDE a larger role in policy making, including budgetary policy making, for the state. Iannaccone's paper provides indication of the difficulties and possible pitfalls awaiting SDE seeking to take a more positive role in presenting programs to the legislature. His conceptual framework depicting the developmental stages of four identifiable political educational structures should be helpful to SDE seeking points of access.

Some states have accomplished the objective of a greater voice in policy making through the efforts of the state board of education. Boards commanding the respect of legislators--we hope their number will increase[6]--and willing to speak for the program of the SDE can provide a point of access. Other departments have been able to use administrative procedures to establish themselves as part of the budgetary process. Still other departments have cooperated with their state boards in holding seminars to acquaint legislators with their program goals.

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[6] At present we fear most state boards, whether elected or appointed, have little political influence. This point is amplified in Roald F. Campbell, "Supplementary Statement." In Edgar L. Morphet and Charles O. Ryan (editors), Implications for Education of Prospective Changes in Society. (Denver, Colorado: Designing Education for the Future, 1967), pp. 267-272.

Ultimately, we suspect that those SDE which are performing necessary services well, will be likely to find means of gaining the legislative ear. Mechanisms not now existing will be established and personnel will be recruited and trained to effectively voice the educational needs of the state to the legislature, the governor, and ultimately to the people.

Interim Steps

In the preceding section we sketched some implications for SDE seeking to perform a role compatible with forces impinging upon education today. Our suggestions are in keeping with and are amply supplemented by Nyquist's background paper. Certainly, the implications we have discussed in terms of programs, personnel, and resources are open to criticism and ought to be discussed. Assuming, however, that we are in substantial agreement regarding the nature of the emerging role of SDE, we must still suggest some interim steps for attaining the prescribed role. Consideration of interim steps and strategies for change are dealt with by Culbertson but let us at least open up such a consideration.

We have referred repeatedly to the McLoone and Lecht papers as models of rational planning involving goal identification and specification, some kind of cost benefit analysis, program development and implementation, and evaluation. This is the point where SDE must begin to accomodate their emerging role and, indeed, this is where many have already begun. One cannot help but be encouraged by the planning efforts undertaken by the eight states in the Designing Education for the Future Project directed by Morphet, and in the program analysis being carried out by half-a-dozen other states on an independent basis.

Analysis of goals of SDE will probably require professionals who are also departmental "outsiders." It seems to us that the interim evaluation and planning step might be accomplished most effectively by contracting with top persons to oversee the analysis. We suspect that self-evaluation conducted by SDE personnel without outside help is likely to rationalize existing programs and procedures and is unlikely to discover many areas in need of renovation.

In undertaking analyses of SDE programs two areas should be given special attention. One is the relations of the department with the state board, the governor, professional associations, and other state agencies, but most especially the legislature. The other is the departments' machinery for gathering feedback from local systems. SDE must begin now to lay the groundwork with the legislature and the local school systems for future modifications and/or expansions in these programs. Means of presenting their needs to the legislature in a positive manner must be initiated as soon as an appropriate course of action has been developed. SDE should begin immediately to develop a system for actively seeking information from dissidents to supplement the more accessible information volunteered by their supporters. This is a necessary step in carrying out an effective program evaluation.

Another interim step might well be one suggested by Nyquist (p. 50) in his discussion of innovation and dissemination. It may prove valuable for some SDE to establish and staff units with explicit responsibility for promoting change and innovation. These units would be expected to deal with problems customarily associated with change and would provide a centralized unit for continuing consideration of innovative programs. Such centers would serve a useful interim purpose in that they would testify to the fact that further changes were likely.

Although additional information is needed in this area, we suspect that SDE will always be confronted with severe personnel problems. We feel that these problems can be somewhat alleviated through redefinition of the role of state departments, but the need for specialists in the next few years is going to be especially great. Persons with skills in demand by SDE in fulfilling their emerging role are also persons in demand by regional laboratories, research firms, universities, urban school systems, and business. Even if SDE could compete equally with these manpower users there would still be insufficient numbers of trained personnel available.

Even so, we suggest that SDE undertake to substantially modify their recruitment and personnel policies. We believe they must attempt to select the most able, presumably young, persons they can attract. Further, it will be necessary for SDE to train their own specialists on an interim basis, and existing personnel policies must be liberalized to accomplish this goal.

Additionally, we feel it will be necessary for SDE to make greater use of consultants as an interim resolution of the manpower problem. It is frequently possible to contract the services of skilled persons for a short time when it would be impossible to employ them, or to pay them an adequate yearly salary. Some states have already made extensive use of contractual arrangements to accomplish specific tasks, and others will probably find it equally useful to supplement the skills of their regular personnel in this manner.

A final interim step may be mentioned briefly. In the transitional period during which we may expect SDE to be groping for effective solutions to difficult problems, it would appear to be especially useful if there were a mechanism for exchanging information among the states. Perhaps the Education Commission of the States can be helpful here. The Title V surveys including examination of a given SDE by representatives from other departments might provide a model for greater interchange of ideas.

In the foregoing sections we did not, and could not, provide a blueprint for SDE moving into a new role. That we did not do so was not only because each SDE is in many respects unique and operating in a unique milieu, but also because there remain numerous critical areas about which very little is known, and about which we must become much more knowledgeable if we are to facilitate SDE in accommodating a new role. Some of the areas in which further study seems especially important include relationships with the legislature, with local agencies, and with federal agencies. We also need studies of ways by which able personnel can be recruited and retained.

There is also need to consider alternative organizational structures of a state department of education. We see structure as instrumental rather than primary and thus dependent upon many variables particularly those of function, size, and strength of present personnel. For many state departments we suspect major line divisions might include instruction, finance and administrative services, teacher education, and publications and public information. Staff divisions, with services available to all line divisions, might include planning and research. But this structure or any other needs careful appraisal in terms of conditions within a particular state.

In preparing this paper we have necessarily worked with a highly generalized concept of the present role of state departments of education. Because any generalized concept of this nature is compatible with no one's experience, it is unsatisfactory to almost everyone. We beg your indulgence for those occasions where our comments seem off target, and solicit your participation in developing a more fruitful understanding of the forces impinging upon state departments of education, the implications of these forces for the emerging role of state departments of education, and in developing feasible interim steps which state departments may take.

CHAPTER XII

THE EMERGING ROLE OF STATE DEPARTMENTS OF EDUCATION WITH IMPLICATIONS FOR VOCATIONAL EDUCATION

Gerald B. James*

James, in forwarding implications, first looks at vocational education in retrospect. Then, selecting points from the eight background papers, he lists trends and forces in society impinging upon state departments and divisions of vocational education, e.g., population trends, problems of disadvantaged, state politics, etc. He follows with general implications for change in state departments, e.g., changes in objectives and in organization and staffing.

In conclusion, James outlines implications for change in divisions of vocational education. For example he suggests at least three major staff groups, one each for: (1) essential regulatory and service functions, (2) research and (3) program planning and consultant services

In Retrospect

In 1917, Congress passed the Smith-Hughes Act, which provided funds for the support of programs of vocational education. Subsequently, other vocational education acts provided additional funds. In addition to the federal categorical aid, in many states appropriations for the support of vocational education have been sepatate from appropriations for general education. Certainly, there must have been some reason for the appropriation of funds for this specific phase as differentiated from other phases of publicly supported education. The Congress and state legislatures have a way of building into their legislation assurance that funds will be used for the purposes intended. Some of the categorical appropriations for vocational education may be attributed to many other areas of education being added or improved before adding or improving programs of vocational education. In some cases, the limited objectives, lack of vision, or strong liberal arts orientation of school administrators may have been responsible. The European system of education, aimed chiefly at the intellectually elite who had little need to "learn a trade," likely had its influence upon school administrators.

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State constitutions or statutes have required that programs of general education be offered, but many have not required school systems to provide programs of vocational education. When a specific course or group of courses are singled out and funded separately, it tends to dichotomize education. Funding separately, administering separately, and supervising separately all have an effect of splitting the total educational program. This, to some extent, is what has happened to vocational education, and is occurring in some other areas of education receiving categorical aid, such as education for the handicapped.

Due to the nature of the content and the facilities required, vocational subjects were often, and still are in many schools, placed in a separate wing, or even in a separate building. The fact that many vocational teachers were trained in the agriculture and mechanic arts colleges and universities, whereas the majority of other teachers came from universities or colleges of liberal arts and science or from teachers' colleges, tended to further separate them. Many vocational teachers have been employed on a twelve-month basis, while principals and other teachers have been employed on a nine-, ten-, or eleven-month basis. The salary scale for vocational teachers has been higher than for other public school teachers in some states. Many vocational teachers were not college graduates but came from the trades, while other teachers were college graduates who might be inclined to look down upon vocational education and upon fellow teachers who were not college graduates. These factors which tended to separate or divide, indeed did so.

General educators, especially principals and superintendents, were often critical of vocational education and the fact that it was somewhat separate from and treated differently than the remainder of public education. When they were critical of vocational education, the vocational education personnel tended to build up defenses against the criticisms. The protective fences or walls were built higher and higher until in some cases they became so high as to severely limit communications with other portions of public education. Exaggerated? Possibly so, but also containing an element of truth.

State plans for vocational education were developed chiefly by vocational education personnel in Divisions of Vocational Education and often protected the pattern of separatism.

This unfortunate situation and relationship may have retarded the growth and development of vocational education in some areas more than the categorical aid promoted its growth and development

As late as 1960 in one state, when a proposal was made to the State Board of Education that a research section be added within the Division of Vocational Education to help give direction to growth, immediate action could not be taken because the research team was to be comprised of a social psychologist, an economist, a sociologist, an educational administrator, and a statistician; and people could not be found who could qualify under the state plan, because the state plan required that all employees hold bachelor's or master's degrees in vocational education and have three to five years experience in vocational education. The contributions which the other disciplines could make to vocational education were not being brought to bear upon the problems and issues within vocational education. All the trouble did not lie at the state level, because efforts to change the state plan in order to gain a higher degree of freedom were sometimes met with resistance from the federal level.

Far from least in importance among the factors which led to separation were the basic philosophies and methodologies of vocational education and general education. First, for many years program orientation in vocational education has been based upon student goals rather than subject matter organized according to ability levels with "tracks" for the various ability levels. Second, vocational education has been organized upon the concept of a core curriculum within broad blocks of time, integrating academic studies and skills using student occupational goals as the focal point. Third, the concept of employing teachers based upon success in their respective areas of experience plus training, practiced by colleges and universities for a number of years and currently being promoted by some educational leaders, has long been a practice within vocational education. Fourth, the acceptance of the philosophy of continued education as a lifelong process by general educators, has been one of the major tenets of vocational philosophy for half a century. Traditionally, public school education, except vocational education, has been for children. Fifth, many educational psychologists and learning theorists have regarded programs of vocational education as operating much more consistently with sound principles of learning than were programs of general education.

The preceding statements have been made to indicate a situation and a great need for change. The situation and its implication for changes cannot be ignored. To this must be added a look at the changing character of the general population, the disadvantaged, the changing occupational structure, projections of student population, the expanding federal role, the emerging organizational structures for facilitating educational change, the role of state government in education, and the emergent functions and operations of State Education Departments. Changes must be made; not change just for the sake of change, but change for the sake of improved education for the citizens of the nation.

Trends and Forces in Society

The larger, more heterogeneous, and more mobile population with which public education must deal presents a challenge to those responsible for providing leadership for public education. Hauser has indicated that the population of the United States is projected to exceed 300 million by the turn of the century; that over 41 per cent now live in six of the largest states; and that only 11 per cent reside in the twenty-one least-populated states and the District of Columbia. These concentrations and lack of concentrations, challenge educational leadership regarding the most effective approaches to providing educational programs. To the rapidly increasing population must be added the problem of providing continuing educational opportunities for the adult population who, for multiple reasons, must continue to learn. How are resources to be allocated among the many educational demands of modern society? More specifically, who shall provide the leadership in deriving acceptable solutions? Will State Departments of Education rise to the task? Is the provision of leadership in these areas included in the major objectives of State Departments of Education? Are they organized, staffed, and equipped to do so?

Hess has rather forcefully and vividly shown that the physically, mentally, socially, and economically disadvantaged have been neglected. Effectively approaching this problem would appear to require a close working relationship among several groups within the State Department of Education, including vocational education and special education, and a number of outside agencies, including colleges and universities, health departments, labor departments, and others. Certainly, sociologists, psychologists, and educational specialists in the colleges and universities should become involved. Who shall provide the leadership in initiating and coordinating action? The State Department of Education appears to be a logical agency.

Iannaccone stated that State Departments of Education are constitutionally, fiscally, and traditionally intertwined with state political processes resulting in educational law, and that an effort to deal with the role of the State Department of Education apart from the state's educational political context is likely to be futile. Some educators regard politics as something to be avoided--something bad. But, I would contend that political action is our societal means of arriving at decisions.

Politics is the decision-making methodology of our democratic society. Innaccone's model of state politics of education depicts four phases. In a society characterized by movement toward planned change, the question arises as to who shall analyze the factors and forces sufficiently to understand the educational politics and provide the necessary leadership needed in public education, including securing adequate financial support.

Ianni indicated that if State Departments of Education are to be effective, they must understand emerging organizational structures for facilitating educational change. He stated that "For some time now, behavioral and social scientists have been studying the diffusion or spread of innovations within behavioral, social, and cultural systems. Psychologists have long been concerned with how individuals learn new patterns of behavior and sociologists with the spread of new social patterns in the interactive system of a society." He continues, "Similarly, economists, political scientists, historians, and social geographers have examined the process in their respective areas of interest." State Department of Education personnel must give attention to the various approaches to bringing about change, including an examination of their own organizational structure as it relates to the research, development, and diffusion process.

Lecht stated that changes in the nation's objectives in defense, space, atomic energy, and health in the recent past have been the dynamic force making for changes in manpower requirements. (See Chapter IV) He pointed out that some of the most important developments in recent years relating education to manpower needs have taken place outside the regular educational institutions. Examples are: The Manpower Development and Training Act, the Neighborhood Youth Corps, and the Office of Economic Opportunity. Very aptly for vocational educators, he stated that through these programs is being developed "an elaborate para-education complex concentrating on vocational education and basic literacy education for adults." Many vocational educators would contend that these programs, or major portions of them, should have developed within vocational education.

Employment opportunities change, and it is not unreasonable to expect many youth now in school to need retraining several times during their productive life span.

Certainly some of the changes in manpower requirements that are attributed to technological advance may be due to the greater importance attached to education in American society. As the supply of well-educated persons increases in virtually all occupational fields, the greater availability of these persons to employers becomes an important factor in raising entrance requirements for many types of jobs. The occupational structure is in a constant state of change. The Dictionary of Occupational Titles is out of date before it is printed. Vocational education personnel must be organized to keep abreast of the changes and should project sufficiently in advance of changes, otherwise, graduates from vocational programs may be trained for jobs which are obsolete.

Masters stated that in 1961 there were ten major federally-funded programs administered through state educational agencies, and that by 1966 the total funds involved had nearly quadrupled--an increase of approximately \$2.5 billion. He pointed out that earlier programs were chiefly supplementary in nature, whereas the newly enacted programs more directly affect basic components of the overall educational programs, including books and materials, teaching equipment, and student support.

Nyquist took the position that State Departments of Education, if they are to be effective, must provide dynamic leadership within the state. (See Chapter IX) Education is the foundation of progress for all citizens, individually and collectively. The days when educators could isolate and even insulate themselves from society is past. The interrelationships among education and other facets of society are strong, and growing stronger and more important according to Nyquist. Educational leaders at all levels must become interactive with all agencies of society--not just colleges and universities, who certainly can help, but with business and industry as well.

The increase in federal interest in education for national purposes has led State Departments of

Education to become increasingly alert to the need for self-evaluation. They can maintain leadership positions only if they organize, staff, plan, and budget aggressively and creatively. State Departments of Education are capable of massing a broader base of educational leadership than is possible at the local levels, which makes possible a competent staff for research, program planning, and policy formulation. Often budgets are inadequate and restrictions in staffing limit effectiveness. Nyquist has stated that: "Internally, some state education departments are plagued with antiquated structure and organization; others operate without benefit of fully developed research and data systems or without adequate provisions for state-wide study, evaluation, and planning; most lack appropriately prepared and experienced personnel in numbers sufficient to achieve and sustain desired levels of leadership and service. And without all of these there, of course, can be no vision, no ability to point to a better way or to help others see what is possible, no capacity to raise local levels of educational expectations." (See Chapter IX)

Implications for Change in State Departments of Education

American society during the past several decades has been dynamic in values, transportation, economic development, government, communications, education, business and industry--almost all facets. Change characterizes the times. It might appear that changes are occurring and will continue to occur, and that the task of education is to change accordingly in order to keep up. U.S.A. 1967 is a planned society, not one given to chance, but one constantly and increasingly studied, dissected, studied, synthesized, and studied again. Various facets are manipulated, consistent with the desired relationship to and effects on other facets of total society. There is less trial and error; less laissez-faire. Rather, projections are made regarding changes desired, then efforts are made to bring them about. That is, determine what type of educational leadership is needed, then bring it about or develop it. State departments of Education, then, must be active, dynamic change agents giving considered direction to change--not passive acquiescence to changing conditions of society. State Departments of Education are the legally constituted body in most states responsible for providing leadership. If they accept the mandate and rise to the occasion, they may well be proud of the improved educational opportunities afforded to citizens.

Recognizing the past, looking at some of the trends and forces in society, and projecting a role in public education which needs to be filled, certain implications appear strong. The major implications for State Departments of Education will be treated under two major headings: (1) Objectives and (2) Organization and Staffing. First, what are the implications for change in objectives? Second, within what type of organizational structure can these objectives be most effectively implemented, and what type of staffing is desired or essential to the implementation of the new objectives?

Objectives

The functions of State Departments of Education have changed in scope in recent years. They range from specific responsibilities, such as the certification of teachers and approval of building plans for local schools, to more generalized responsibilities, such as the general supervision of all public school education within the state. There is likely constitutional and statutory authority in every state for the State Department of Education to enforce educational requirements of a reasonable quality and scope.

With the wide latitude of freedom allowed, however, State Departments of Education can greatly plot their own direction.

Emphasis in many State Departments of Education has been placed chiefly upon regulatory and supervisory functions. Time, energy, and effort have been devoted to the development of standards. Incentive and base funds have been distributed, then recipients carefully observed to see that they met established standards and statutory requirements associated with receipt of the funds. Obviously, some attention to regulatory functions has been brought about by legislative mandates. Typically, State Departments of Education have devoted an insignificantly small portion of their funds to research as a basis for indicating direction. In fact, many State Departments of Education have not had research objectives or research personnel. A survey in one state during the past ten years indicated that the State Department of Education devoted a smaller percentage of its budget to research than most all other departments of state government in that state. In many cases, objectives have been solidified for a number of years, failing to keep abreast of a dynamic society. In other cases, objectives have been so broad and vague as to lead State Department of Education personnel to devote their time to "going about doing good." Such objectives led to little genuine leadership and considerable complacency.

The implications, then, are for a movement away from primary emphasis on regulatory and supervisory objectives toward increased emphasis on research, program planning, and the provision of consultant services in a change agent role.

Organization and Staffing

The proposed change in objectives would necessitate change in the organizational structure of State Departments of Education. Many departments practically solidified their organizational charts years ago and continue to refill positions as they become vacant. They are effective in maintaining the status quo perhaps, but decisively ineffective in providing the dynamic leadership needed from State Departments of Education. For example, some departments had personnel forty years ago who checked the college courses needed in various categories as a basis for certification of teachers. While some continue to refill such positions as they become vacant, others have developed agreements with the colleges and universities regarding the total programs of teacher education in the respective institutions--an approved program approach--so that all who graduate in the teacher education curriculum are automatically issued teachers' certificates. The responsibility is shifted from regulatory action by the State Department of Education to a cooperative venture in teacher preparation and certification. The approach is more acceptable to both the State Department of Education and to the institutional in that neither is having to police and neither is being policed. Furthermore, the institute tional personnel's best ideas are released toward teacher preparation rather than following regulations established by the State Department of Education. More talents are brought to bear upon developing teacher preparation curricula.

Some functions performed by State Departments of Education years ago and perpetuated through an ironclad organizational structure have brought disrepute to education in a democratic society seeking improvement through planned change.

An organizational structure more nearly consistent with the proposed objectives would require at least three major staff groups, one each for: (1) essential regulatory and service functions, (2) research, and (3) program planning and consultant services.

The regulatory staff should be comprised of individuals with education and experiential backgrounds for performing their duties. This definitely does not mean that they must hold a teacher's, principal's, or superintendent's certificate, nor must they have taught, or even been involved in public education for a specified number of years. Perhaps the ridiculous is attempting to fill a vacancy with a person with training and experience in electronic data processing, including programming and systems analysis, who also holds a graduate teacher's certificate and has at least five years experience in secondary teaching or administration. Staff members should be sought who possess the qualifications to perform the functions necessary, and "functions necessary" should bear close scrutiny.

The research staff should represent a broad variety of disciplines, including educational administration, vocational education, psychology, sociology, economics, and statistics. Prior experience in public education should not be the primary criterion in the selection of personnel. A small nucleus of permanent staff with freedom to attract highly qualified personnel on one-, two-, and three-year bases from business, industry, colleges, and universities would be one approach deserving consideration. The major problems and issues of public education have not had brought to bear upon them the talents of many facets of American society. Education cannot afford to continue its policy of being isolated from and insulated against society in general. Under this approach, personnel could be secured with special interests in selected areas. They could secure leave of absence from present positions for a period of time, long enough to plan and implement a research study or studies in their area of competence, after which they could work with the program planning staff in planning for the use of results in local situations. The individuals then could return to their original work. This should prove effective with some personnel from business and industry, and certainly should be effective with college and university personnel and public school personnel. In fact, public school personnel might join the staff for sufficient time to secure help and guidance in planning research, after which they might return to their field positions and implement the studies with some continued assistance and guidance from the State Department of Education research and program planning personnel.

Most of the results of the research group would be fed into the program planning staff of the State Department of Education. Research personnel would not attempt to work directly with public school personnel in field testing research hypotheses; seeking out prospective innovators; putting on demonstrations and the like. The program planning staff, more knowledgeable about field conditions, field personnel, and leadership patterns within the public schools, would perform these functions. They would take the results to the public school personnel or would utilize results in program planning ideas which would go to the public school personnel. They would develop literature from research reports appropriate for public school personnel as well as conduct in-service education programs, including workshops and seminars. In addition, they would work closely with the college and university personnel in planning courses appropriate for public school personnel. If a separate group or semi-separate group of consultants as differentiated from the program planning staff were maintained, the flow and working relationships would be changed accordingly. This approach is not foreign to business and industry, and has been used quite effectively in at least one nationally known area of college and university work--agriculture. Most schools of agriculture have three components: resident instruction, research, and extension. The research personnel feed their research findings to extension personnel who transform the reports into lay language and extend it to the farm people.

The total State Department of Education would be characterized by flexibility. It would be an agency to facilitate change. It would encourage all schools and colleges to experiment with promising newer practices and media on their own initiative. It would fill the role of a coordinating force to bring all possible influences to bear on solving the problems which deter education and its progress. The present job descriptions and standardized salary scales, along with other elements of solified character, would give way to a State Department of Education intent upon playing the role of change agent, providing dynamic leadership in a society characterized by planned change. This structure would appear to be sufficiently broad and flexible to allow a State Department of Education to fulfill its role, including: the necessary regulatory and service functions, research as a basis for indicating direction, and program planning as a basis for bringing about change in the public schools.

Implications for Change In State Divisions of Vocational Education

The discussion thus far has dealt with total State Departments of Education. What implications does the preceding proposal have for Divisions of Vocational Education?

Each division of a State Department of Education might be organized according to the preceding proposal, or a total State Department of Education might maintain its existing basic organizational structure with the three proposed groups being added to serve the total State Department of Education, or the State Department of Education could be reorganized around a refined core of the three general groups proposed. It is not the intent here to propose a specific organizational structure, but rather to indicate a broad general direction which, if regarded as appropriate, could be spelled out in detail and refined for use within any state, taking into account the special conditions, problems, and issues faced within the state.

Obviously, the organization of each division of a State Department of Education, according to the proposal, would have numerous limitations, including the difficulty of coordinating efforts. The maintenance of the existing basic organizational structure with the three proposed groups being added would be less disruptive initially, but would necessitate much coordination among existing divisions within the three new groups. This approach would lend itself to bringing to bear upon all divisions the assistance of the three proposed groups. If the entire State Department of Education were reorganized around the three proposed groups, each of the three groups would need to be staffed to deal with the total public education program. There would be personnel in each group knowledgeable regarding vocational education. The rate at which the transition could be effected would depend upon: (1) the rate of acceptance of the concept by vocational educators and other State Department of Education personnel, (2) the rate with which competent personnel could be secured for staffing within the proposed pattern, and (3) the rate with which non-vocational education personnel would educate themselves regarding the need for, the place of, the philosophy and methodology of, and the operation of programs of vocational education with sufficient effectiveness that federal, state, and local policy and lawmakers would no longer regard it necessary to specify funds for vocational education separate from funds for public education in general.

CHAPTER XIII

A STRATEGY FOR STRENGTHENING STATE EDUCATION DEPARTMENTS THROUGH RESEARCH, DEVELOPMENT, AND TRAINING

Jack A. Culbertson

Culbertson discusses the impact of federal legislation, the growth of urbanization, the increasing investment of government and business leaders in education, the press toward planning and evaluation in education, expansion of research and development activities, and emergent educational technology as major forces creating special challenges for state education departments.

He suggests a strategy which would involve carrying out a number of research, development, and training activities by a consortium of five to eight universities aided by state education leaders with the general purpose of strengthening state education departments.

One hundred years ago state education department leaders were riding the crest of a very significant movement to improve education in this country. Led by such chief state school officers as Henry Barnard of Connecticut, Gideon Hawley of New York, John Pierce of Michigan, Horace Mann of Massachusetts, Caleb Mills of Indiana, Calvin Wiley of North Carolina, and Robert Breckenbridge of Kentucky, the movement was to bring deep and pervasive changes in education and to have far-reaching impacts upon American society.

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These changes did not occur without conflict and controversy. As a matter of fact, local responses to educational change were similar to those expressed in recent years toward nationally oriented movements to improve education. Thus, the outcries were widespread and vociferous against such developments as compulsory education laws designed to achieve universal education. Citizens and educators argued, for example, that these laws represented a crime more evil than the conditions they were designed to remedy.[1] It is also notable, in the current era of educational ferment, that the great changes initiated by leaders one hundred years ago did not come to fruition immediately. Thus, a chief state school officer in Colorado in 1877 remarked that compulsory education laws were a well-proven failure and, as late as 1893, the Governor of Pennsylvania vetoed a state compulsory education law.

The conditions confronting leaders of state education departments today are markedly different from those of one hundred years ago. Rather than giving thrust to major changes in education, most of those in state education departments are now engaged in adapting to far-reaching changes which have largely been and are being thrust upon them. Rather than initiating change, they are now forced to adapt and react to it and to implement it. Thus, at a time when education is achieving a new significance in society, state education department leaders are faced with challenges requiring substantial and significant adaptations. Before describing research, development, and training strategies designed to help state education departments to meet emergent demands, some of the forces helping to create these demands need to be briefly delineated.

Some Forces Creating Challenges For State Education Departments

Many are the forces now impinging upon state education departments which will continue to create challenges for them. Only a selected number will be noted here. Those identified for discussion are judged to be among the forces which (1) are already posing special challenges to state education departments; (2) will likely remain crucial to these departments for at least the next two decades and perhaps longer; and (3) have special implications for those interested in defining research, development, and training strategies to improve state departments. The purposes of the discussion will be to delineate the nature of the forces affecting state education departments and to suggest some of the issues and problems now facing those responsible for improving state education departments.[2]

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[1] Jack Culbertson. "Attendance," Encyclopedia of Educational Research, New York: McMillan and Co., 1960, pp. 92 ff.

The Impact of Federal Legislation

As Nicholas Masters has already made clear, the amount of federal legislation for which state education departments have administrative responsibility has increased phenomenally in the last five years.[3] In 1961 state departments administered approximately three-quarters of a billion dollars in federal funds, but in 1966 the amount had grown to approximately three billion. During this five-year period the number of federal programs administered by state education departments increased from ten to twenty and the size of appropriations has increased substantially in recent years. Complicating the problem further is the increased diversity of purpose inherent in new legislation and the wider range of clientele served by emerging programs. The Higher Education Facilities Act and the National Foundation on the Arts and Humanities Act would be illustrative of state administered programs involving new clientele.

Mounting federal legislation certainly has brought major challenges to state education departments. One immediate challenge, for example, is that of being able to recruit staff in sufficient numbers and of sufficient quality to administer burgeoning federal programs. Thus, a study done in 1966 under the leadership of Roald Campbell of the University of Chicago on the impact which Title V of the Elementary and Secondary Education Act has had on state education departments showed that 600 positions were created in 1965-66 by this one aspect of the Act.[4] That there were difficulties in meeting this challenge is suggested by the fact that only 400 of these positions were filled. Even though specific data concerning staffing are not available on the many other federal programs administered by state education departments, there would seem to be little question that those responsible for recruiting state department personnel are being faced with unprecedented challenges.

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[2] The discussion is based in part upon a number of published and unpublished monographs and manuscripts which are cited in footnotes. I am also indebted to a number of chief state school officers who have provided written materials about state departments on a confidential basis which I am not privileged to cite.

[3] Nicholas Masters. "The Expanding Federal Role with Implications for State Education Departments."

Back of the challenges of recruiting staff members are more basic problems. For example, how can state education departments take on the administration of large federal programs and, at the same time, maintain the perspective necessary to provide analytical feedback to those in the federal government who are responsible for making needed administrative and/or legislative adaptations? How can state education departments take on the large administrative tasks that have been handed them and not impair performance of already existing functions? How can state education departments adapt to new demands posed by federal legislation and still exercise initiative and leadership in education within the specific geographical boundaries they serve?

There seems to be rather widespread agreement that the amount appropriated by the federal government for education in the years ahead will increase. This will undoubtedly be true in relation to already existing federal programs as well as new ones likely to be created. The manner in which state education departments meet the challenges posed by these developments will have crucial effects upon their own growth and development and, more basically, upon the quality of education in the various states.

The Growth of Urbanization

Last year the National Citizens Commission's

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[4] Roald Campbell, et. al. "Title V" (Mimeographed) pp. 8 ff.

Report of the Committee on Urban Development summarized in general terms the current impact of urbanization as follows:

> Urbanization, once a manageable, gradual, and slow moving force in man's history, has accelerated and has made such impact in the last fifty years that it must be accounted one of the truly great revolutionary forces of the 20th Century.[5]

Statistics presented by Philip Hauser show the quantitive dimensions of the urban "revolution"[6] However, these dimensions of the urban population, while important, are not the major indicators of the revolution as implied in Robert Hess' discussion of disadvantaged, children, and youth.[7] Unfortunately, the quality of life and of public services (including education) in big cities is far from satisfactory and, more significantly, it has dangerously deteriorated over the past few decades. Dramatic disturbances, including violent race riots, have resulted from this deterioration. In August, 1966, the then United States Attorney General, Nicholas Katzenbach, eloquently highlighted the inadequate quality of life in the city in the following statement made before a Congressional committee:

> The Department of Justice, deeply opposed to violence and deeply concerned over any breakdown of law, has looked carefully into the causes of the riots. We conclude that they were indeed fomented by agitators--agitators named disease and despair, joblessness and hopelessness, rat-infested housing and long-impacted cyncism...

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[5] "National Citizens Commission Report of the Committee on Urban Development," The White House Conference on International Cooperation Staff Report for the Subcommittee on International Finance of the Committee on Banking and Currency, House of Representatives, Washington, D. C.: U. S. Government Printing Office, 1966, p. 5.

[6] Philip Hauser. "The Changing Characteristics of the General Population: Implications for Education."

[7] Robert Hess. "Obtaining Optimal Educational Opportunity for Disadvantaged Groups."

> They are the product of generations of indifference by all of the American people to the rot and rust and mold which have been allowed to eat into the core of our cities.[8]

Recent studies show that state governments generally have not met the challenges and problems posed by increasing urbanization. Most state education departments, as a part of state governments, have viewed large city school systems as largely beyond their purview. In the words of James E. Allen, New York State Commissioner of Education:

> In many states, state education departments are totally unprepared for providing such leadership and assistance. Like their Legislatures which created and maintain them they have been, and to a large extent still are, heavily oriented toward rural communities.[9]

Several studies have shown that the large majority of staff members in state education departments have been recruited from rural and suburban school districts. Therefore, they are not well equipped to relate to educational personnel in big cities and to understand the problems which confront them. This condition may help to explain why so few state education departments have been intimately involved with de facto segregation, urban vocational education, the civil rights movement, high urban drop-out rates, large-scale adult illiteracy, culturally disadvantaged students, limited financial resources, and other current and emergent big city problems. With a projected four out of five persons living in the urban context by 1980, it seems very clear that if state education departments are to be successful they will have to do a more effective job of relating to educational systems in these centers.

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[8] Hearings before the Subcommittee on Executive Reorganization of the Committee on Government Operations, United States Senate. Federal Role in Urban Affairs (Washington, D. C.: U. S. Government Printing Office, 1966), p. 254

[9] James Allen. "Urban Education--Today's Problem, Tomorrow's Hope" (Mimeographed), p. 19.

The Deepening Influence on Education of Business and Government

As education becomes more and more important to society and as increasing investments are made in it, various groups become more closely attached to and deeply involved in it. One of these groups currently, for example, is the business community. Since education is widely viewed as one of America's greatest growth industries, it offers the business community new markets and unusual investment opportunities. Charles Silberman, for example, has labeled the complex of new mergers, acquisitions, and joint ventures designed to enhance business' participation in the education industry as "The Education Market's New Family Tree."[10] He lists approximately twenty-five electronics manufacturers, publishers, maufacturers of educational materials, and mass communication companies which have entered into new relationships since 1964. The mergers have helped electronic companies, which manufacture educational "hardware," to enter into partnerships with organizations which are engaged in producing educational "software." With their special technological capacities and with the increasing government support afforded these companies they are playing and surely will continue to play an expanding role in education.

Local, state, and federal government leaders are also more deeply involved in education than ever before. The long-standing myth that education is separate from politics is being dramatically exploded in various ways. This is evident, for example, in remarks made by Agnes E. Myers when she recently welcomed a group of 300 state legislators and educators to a three-day conference devoted openly to the "politics of education" and the "education of politicians":

> This is a different kind of meeting from any ever previously held on education. It is different because it is frankly political. After all it is you the state legislators who decide what the

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[10] Charles Silberman. "Technology is Knocking at the School House Door." Fortune Magazine, August, 1966.

appropriations for education will be.[11]

Another example of efforts to create new relationships and to break down communication barriers is found in the relatively new Education Commission of the States. Designed explicitly to promote communication between state government leaders responsible for the support of education and professionals directly involved in the process of education, the organization is clearly attuned to some of the emergent values of the times.

The greater participation of special groups such as those comprising state government leaders and members of the business community post, then, new challenges to state education departments. If these departments choose to remain aloof and to be largely separated from the new participants in education, they run the risk of not being able to influence important decisions. If, on the other hand, they choose to work actively and intensively with the new participants in education, basic changes will be required in staffing practices, in orientation, and in attitude among personnel in many state education departments. The shifting educational power structures and influence relationships in the states pose, then, something of a dilemma for those in state departments of education.

The Press Toward Educational Planning and Evaluation

As schools and institutions of higher learning request greater sums of money, the press for more systematic planning and rigorous evaluation in education increases. The question being raised with increasing frequency by government leaders--"Are we getting the most possible for our money?"--reflects a mounting concern about whether or not the large sums of money invested in education are being allocated and used in the most effective and efficient manner. At the state level, for example, Jesse M. Unruh, Speaker of the California Assembly, recently observed:

> In my judgment, well informed legislators governors and administrators will no longer be content to know, in mere dollar terms, what constitutes the abstract "needs" of

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[11] Agnes Myers. "National Conference of State Legislators: Welcoming Address." (Mimeographed), p. 1.

> the schools. California educators have used this tactic with our Legislature for many years with constantly diminishing success. The politician of today, at least in my state, is unimpressed with continuing requests for more input without some concurrent idea of the schools' output.[12]

A similar concern was clearly expressed at the federal level in Title I of the Elementary and Secondary Education Act in which is set forth the requirement that Title I programs be evaluated at least annually by objective measures. At the local level where the competition for the tax dollar, particularly in the big cities, is very intense, the concern is also evident. Thus, John Lindsay, Mayor of New York City, noted early in his administration that his city was spending considerably more per pupil than was the case in other large cities; and further, that he would be asking for "performance date" when he considered future requests for financial support.

Concurrent with the mounting concern of the last decade about the relationship between financial input and educational output has been the development and use during the last ten years of new plannings methods and techniques in institutions other than education. Widely used in business and government, the new planning methods and techniques are encompassed in such terms as operations research systems analysis, systems planning, PPBS, and cost-benefit analysis. Max Ways has described the characteristics of the new pattern of planning as follows:[13]

(1) a more open and deliberate attention to the selection of ends toward which planned cction is directed, and an effort to improve planning by sharpening the definition of ends,

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[12] "State Planning for Tomorrow's Schools," Newsletter, National Committee for the Support of Public Schools, 1424 Sixteenth Street, Washington, D. C., p. 2.

[13] Max Ways, "The Road to 1977," Fortune Magazine, January, 1967, p. 95.

(2) a more systematic advanced comparison of means by criteria derived from the ends selected,

(3) a more candid and effective assessment of results usually including a system of keeping track of progress toward interim goals. Along with this goes a "market-like" sensitivity to changing values and evolving ends,

(4) an effort, often intellectually strenuous, to mobilize science and other specialized knowledge into a flexible framework of information and decision so that specific responsibilities can be assigned to the points of greatest competence,

(5) an emphasis on information, prediction, and persuasion rather than on corecive or authori arian power, as the main agent of coordinating the separate elements of an effort,

(6) an increased capability of predicting the combined effect of several kinds of simultaneous action on one another; this can modify policy so as to reduce unwanted consequences or it can generate other line of action to correct or compensate for such predicted consequences.[14]

The Bureau of the Budget's Bulletin 66-3,[15] issued by the Johnson administration in 1965, requires federal agencies to use the planning-programming-budgeting system. This Bulletin is a specific and important expression of the new emphasis on planning as is the special section entitled "Planning-Programming-Budgeting System" in the President's 1967 Budget Message to Congress. Popularly known as PPBS, the system now beginning to be used by government agencies grew directly out of the use of systems analysis, systems planning, and operations research in the Defense Department.

There seems little question that the methods will be applied more and more to local and state government even though, as Eugene McLoone has demonstrated, there are a number of complex and technical questions associated with prediction and planning.[16] That it is having an effect in education is suggested by the recently established Division of Operations Analysis within the U. S. Office of Education. The methods unquestionably will be applied to education at the state level and in large cities since large sums of money are spent in these units and large populations are involved.

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[14] Ibid., p. 196.

[15] U. S. Bureau of the Budget; Bulletin 66-3; Planning-Programming-Budgeting. (October 12, 1965).

Already significant work is underway which involves state education departments and which has important implications for those interested in state planning and evaluation. A quote from a mandate passed by the General Assembly of Pennsylvania in 1963 is illustrative:[17]

> ...To implement the purpose of this subdivision, the State Board of Education, as soon as possible and in any event no later than July 1, 1965, shall develop or cause to be developed an evaluation procedure designed to measure objectively the adequacy and efficiency of the educational programs offered by the public schools of the Commonwealth. The evaluation procedure to be developed shall include tests measuring the achievements and performance of students pursuing all of the various subjects and courses comprising the curricula...

The sections on "Long-Range Planning" and "Evaluation" in Ewald Nyquist's paper delineate clearly some of the implications of the new emphases on planning and assessment for state education departments.[18]

The greater concern, then, for evaluation and planning in education will have important implications for state education departments. Highly technical skills, a capacity for tough-minded thinking, and an understanding of concepts from various social sciences, from mathematics, and from the computer sciences will be necessary for planning teams employing the emergent new methods. In addition, highly effective systems for collecting, organizing, processing, and retrieving information are requisite conditions. These facts have important implications for the manner in which state departments are organized and staffed, for in-service education, and for the size, number, staffing, and organization of school districts in the various states.

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[16] Eugene McLoone. "Changing Characteristics of State and National Student Populations."

[17] Educational Testing Service. A Plan For Evaluating the Quality of Educational Programs in Pennsylvania Volume I: Basic Program, p. I

[18] Ewald Nyquist. "Emerging Functions of State Departments of Education."

Perhaps the most basic challenge posed by the increasing trend in society toward more rational planning and evaluation to state department leaders as well as to educators generally will be attitudinal in nature. The rigorous examination of basic assumptions and objectives, and the weighing of costs and benefits in relation to assumptions and objectives within a framework of empirical data require courage and a capacity to look rigorously at the status quo. This is not easy since, as someone has facetiously noted, we tend to be very emotional about facts and very scientific about making value judgments.

Max Ways maintains that the continuation of the new and emergent style of planning in our society is the most significant prediction that can be made about the next ten years.[19] He concludes that this new approach to planning and problem solving "offers substantial hope for resuscitating state and local government." Thus, it would seem that the results attained so far from systematic planning and assessment methods are sufficiently promising to ensure an expansion of their use in society generally and in education specifically. What will be the stance of statee education departments on the issues of planning and assessment as we move into the future?

The Expansion of Research and Development Activities

After decades of inadequate investments in research and development designed to improve education, a beginning shift away from this practice seems unmistakably clear. It is well known, for example, that research and development funds for such special areas as vocational education have increased substantially in recent years as have funds for more general educational research and development purposes. Francis Ianni has described in some detail the new structures which have emerged in the form of regional laboratories, research and development centers, and other special centers designed to advance research and development in education.[20] New programs to prepare researchers and developers have also come into being in universities with the support of federal funds.

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[19] Ibid., p. 94.

As such research and development activities grow, they will continue to provide a better base for effective educational planning and innovation. A necessary accompaniment of the growth of R & D activities will be the development and use of new ways to store, retrieve, and disseminate information concerning the products of these activities. Already a major approach to this problem has emerged in the form of the Educational Research Information Center. Decentralized clearinghouses, closely related to ERIC Central, will, when operational, disseminate information on vocational education, learning, special education, instruction, personnel administration, and many of the other aspects of education with which state departments have been concerned in their dissemination efforts to school districts.

Emergent developments related to research, development, and dissemination pose a number of questions to state education departments among which are the following: To what extent should the state education departments engage in research, if at all, and how should they apportion their time between development and dissemination activities? What should be the relationships of state education departments to research and development centers, to regional laboratories, and to national and decentralized ERIC centers and what should be the division of labor with regard to research, development, and dissemination among these various institutions? What kinds of adaptations are needed in the existing dissemination arrangements of state education departments?

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[20] Francis Ianni. "Emerging Organizational Structures for Facilitating Educational Change with Implications for State Education Departments."

Emergent Educational Technology

It is well known that technology is a major producer and bearer of change in any culture, subculture, or institution. Therefore, clues to the future of education may be found in an examination of emergent and relevant technology. In this regard, it is evident that a number of new technologies are having impacts upon education. Perhaps the one which will have the greatest impact upon education and educational organizations, long-range, will be computer technology. These machines and the information-gathering, processing, storing, and retrieving capacities associated with them, as well as the administrative decision and instructional strategies which they will make possible, unquestionably will change educational organizations substantially during the next two decades. The general direction which change is likely to take has been described recently by Springer.[21] First, computers will play an increasingly vital role in the administration of education as the conventional data processing functions of large educational organizations are delegated to computers; as they assist educational administrators to make more effective decisions concerning the allocation and use of financial resources; and as they help solve routing, scheduling, inventory, and related management problems in educational institutions.

A second area of computer use is that of information storage and retrieval. As the volume of information expands in organizations and as it becomes less and less expensive to store, retrieve, and transmit information through various kinds of media, computers will play a greater role in supporting instruction. Machines, in other words, will be able to store information and to retrieve it from such siffering sources as bibliographies; audio and audio-visual reproductions of music, speeches, and plays; filmstrips; kinescopes; movies; and closed-circuit telecasts.

A third area, and perhaps the most significant of all, is the direct use of the computer in the actual learning processes of students. Already important experimental work is underway in several parts of the country. Patrick Suppes, a leader in the movement, recently remarked: "...it is fair to forecast that in the next ten years the impact of computer assisted instruction will be felt in a very large number of school systems in this country. ...What is important is that by the use of computers we can realize the goals of individualized instruction that have been discussed in American education since the beginning of this century; and we can take another significant step toward realizing the full learning potential of our children."[22]

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[21] For a recent discussion of computer technology see C. H. Springer, "The Systems Approach," Saturday Review, January 14, 1967, pp. 57 ff.

A fourth area in which the computer will play an increasing role is that of research. Because it can collect, order, and analyze educational data at extraordinary speeds, it can serve many of the purposes and processes of research. At the same time it will afford new opportunities for research. An example would be the study of administrative decision-making through man-machine interaction on computer simulated problems.

Certainly the implications of emergent computer technology for state education departments are very great indeed. They raise questions about "ideal" state systems of educational information processing and the need for special computer services in state education departments. The relationship between local, state, and federal information systems, and the interchange among these systems is another emergent question. The organization of school districts to ensure adequate information-gathering, processing, and storage is a third question of central significance.

In summary, then, major forces are now impinging upon state education departments. Among these are the impact of federal legislation, the growth of urbanization, the press toward greater planning and evaluation in education, the deepening influence on education of the government and business communities, the expansion of research and development in education, and emergent educational technology. These forces are creating major challenges for state education departments.

The outlook, however, is not without hope. Even though state education departments are faced with difficult questions and unprecedented challenges, there are a number of hopeful signs which should not be overlooked. One of six recommendations developed at a national conference of state legislators in December, 1966, for example, began with the observation that it is "essential that state departments of education be strengthened."[23] The recommendation emphasized the need for more state financial support and the necessity for increasing salaries of top executives in state departments to a point where they are comparable with the salaries of top officials in local school systems. The federal government is also on record to the effect that state education departments should be strengthened. More important, Congress is providing funded programs to strengthen these departments. Title V programs supported through the Elementary and Secondary Education Act and activities supported through the Vocational Educational Act of 1963 represent significant ap--proaches to strengthening state departments. During recent months an increasing desire to aid state education departments is discernible among scholars in universities. This conference is the latest evidence of this motivation. Finally, there are signs of various kinds that state education department leaders themselves are strongly interested in finding better ways to meet the challenges before them.

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[22] Patrick Suppes. "The Computer and Excellence." Saturday Review, January 14, 1967, p. 48.

A Proposed Strategy

A major assumption underlying this conference is that university-based research, development, and training activities offer one very important way of strengthening state education departments. This implies the establishment of some kind of new arrangements between universities and state education departments. It also implies that universities will need to make adjustments and changes in their own objectives and activities if they are to be successful in helping state education departments cope effectively with the forces now impinging upon them. The challenge before us, in other words, is a double-ended one requiring adaptations on the part of both state education departments and universities.

In order to break needed new paths and to pave the way for a substantial number of institutions of higher education to be of greater assistance to state education departments, it will be necessary as a first step for a selected and limited number of universities in cooperation with state education leaders to develop innovative research, development, and training plans. In more specific terms, it is proposed that from five to eight universities band together with state education department leaders to form a consortium with the general purpose of strengthening state education departments. The functions which the consortium would perform to achieve this general purpose would be those of research, development, and training. It would be aided in its planning and policy development by an advisory body consisting of chief state school officers or their designates, university personnel, business executives, and government officials.

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[23] "State Planning for Tomorrow's Schools." op.cit.

Before the consortium could be launched, attention would need to be given to a number of more immediate objectives. Among these would be the following: attaining effective university-state department relationships; establishing needed communication links with relevant institutions, agencies, and individuals external to the consortium; determining the goals which should guide the consortium effort; defining activities which should be undertaken to achieve the goals; and attaining a division of labor among universities to carry out the defined activities. The remainder of this paper will be devoted to a discussion of these more immediate objectives.

Attaining Effective University-State Department Relationships

The quality of the relationships existing between universities and state education departments will be extremely important in determining the outcomes of any research, development, and training plans which a consortium might generate. Therefore, it would seem important to give some attention to these relationships at the outset. Although little systematic information exists on various facets of existing state department-university relationships, some general observations can be made.

It would seem that the usual pattern is for the major university (or universities) in a given state to relate to its own state education department but to have little or no contact with state education personnel in other states. Joint planning patterns involving university and state education department personnel seem more random than systematic and they tend to deal with short-term considerations rather than long-range objectives. Although there are a few examples where a university has established regional or national relationships, these tend to be temporary and for short-term purposes. The Ohio State University through its Center for Vocational Education is one of the few institutions seeking to relate on a continuing basis to all state education departments in its training activities.

The division of labor with reference to research, development, and training between state education departments and universities is not always clear. However, it seems that universities have the major responsibility for research and for pre-service training. Both have responsibility for in-service education, although the orientation of state departments has traditionally been limited more to the immediate state which each serves. The emergent field of development does not now seem to have a well defined and consistent locus. This is in part true because teams of specialists from both the university and the field are usually required for effective developmental work in education.

It is recognized that both state departments and universities are proud institutions with strong desires for independence. Because their objectives and operations differ, they do not share the same perspectives toward or assign the same values to research, development, and dissemination. This often creates problems for those interested in seeing university and state department personnel cooperate in the planning and implementing of research, development, and training activities.

Clearly, if major research, development, and training activities are to be undertaken to strengthen state education departments the relationships between universities and these departments will need to be altered. The thesis is advanced here that those universities and state education departments which take the lead in the consortium effort should move along the following lines: the relationships of universities to state education departments should be nationally rather than state oriented; planning processes to strengthen state education departments through research, development, and training should involve personnel in both universities and state education departments, and should be bolstered by the assumption that both parties have something unique to bring to these endeavors; and planning should result in divisions of labor among participating universities which are based upon clearly established research, development, and training priorities, on the one hand, and upon the relevant strengths and motivations of personnel in the participating universities, on the other.

Establishing Needed Communication Links with External Agencies

Since the consortium would serve a large constituency not directly and immediately involved in the effort, needed linkage with other institutions, agencies, and personnel would have to be established. Among the primary organizations and agencies to be considered would be: UCEA universities not directly involved in the consortium; organizations such as the Council of Chief State School Officers, the Education Commission of the States, and the Council of State Governments; more national specialized bodies such as the American Vocational Education Association; regional laboratories; and state and local boards of education.

A major purpose of linkage efforts would be that of disseminating the results of the consortium activities and of attaining feedback on the implications and applications of the results achieved. Another important objective would be that of enhancing actual participation in the consortium effort. This might, for example, result in external advice from those interested in state department administration and the consortium activities. Or it might involve direct participation in consortium activities by enabling interested professors in universities outside the consortium to engage in selected activities in which they had interest and competence.

In order to facilitate dissemination and linkage of the consortium to national and state bodies, each unit in the consortium would need to achieve needed relationships with such bodies during the planning period. In addition, it would be desirable to have staff help external to the consortium to support and facilitate the distinct efforts of the various universities as well as to expand the outreach of their efforts. Since the functions of the consortium effort would be those of research, development, and training, and since the effort would involve inter-university and inter-agency communication and cooperation, an organization such as UCEA would be well equipped to serve the external function. It might, in addition, do special development work to complement and support the activities carried out be universities.

Objectives of the Consortium

From what has been said it will be evident that a major problem of the consortium would be that of defining its objectives with sufficient precision to ensure that (1) matters of highest priority are identified; and (2) the unique strengths and motivation of personnel in the participating universities are carefully assessed; and that (3) a clear division of labor is attained based upon the unique strengths and motivations of the participating universities. Clearly, the task of defining objectives cannot be achieved by any one institution or individual. However, an effort will be made here to initiate the task of goal definition on the assumption that, if the consortium is implemented, much additional work will be required on the part of those who comprise it. The ideas to be delineated will be discussed in relation to the functions of the projected consortium -- research, development, and training.

Research Objectives. Up to this point in time, research on state education departments has been limited. If programs of preparation are to be improved and if development and dissemination activities are to be strengthened, more knowledge and understanding of state education administration and the environment within which it operates will be essential. Therefore, a significant portion of the consortium activites should be oriented toward the adv ncement of knowledge. Among the research objectives which the consortium might seek to achieve are the following:

(1) more knowledge of the politics of education and the political environments within which state departments of education work;

(2) better knowledge of manpower requirements in education, of relationships between in-puts and out-puts in educational organizations, and of new modes of inquiry which would help illuminate the relationships between in-puts and out-puts;

(3) greater understanding of the interrelationships

and interactions between local, state, and federal personnel responsible for education and more insight into the dynamics of administering federal and state legislated programs in education; and

(4) better knowledge of the leadership processes of state education departments, including communication, decision making, and the initiation of change.

Development Objectives. While efforts directed toward advancing knowledge were taking place within the consortium, other endeavors would be aimed at designing new solutions to significant leadership problems in states and state departments. Developmental outcomes might consist of two types: (1) those having direct and immediate effects upon the internal operations of state education departments and (2) those more directly related to the education and educational systems within the states.

Development objectives more directly related to the operations of state education departments might include the following:

(1) estimates of the number and classes of manpower which state education departments will require during the 1970's with recommendations concerning how manpower needs might be met;

(2) demonstrations in a number of departments of new arrangements to facilitate and advance state planning for education;

(3) demonstrations in a number of departments of new state systems of information processing in education designed to support planning, assessment, and administrative decision making; and

(4) new communication channels and media designed to communicate concepts, research findings, and developments now beginning to emerge from research and development activities in education to school systems quickly and effectively.

Developmental objectives more directly related to the educational systems of the state and to the attitudes and understandings which citizens and leaders hold toward these systems might include the following:

(1) more refined systems for assessing education and for measuring the relationships between the in-puts and out-puts of educational systems;

(2) the design of new state foundation programs to support education which take into consideration the special implications of urban centers, burgeoning federal programs, emergent technology, disadvantaged populations, relationships between higher education and public school systems, economic growth, changing tax bases, and other important factors;

(3) newly designed certification requirements based upon a study of the great and continuing ferment in education and the attendant personnel crises at all levels of our educational systems; and

(4) new ways for providing interested citizens in the different states opportunities to understand our growing educational systems, their benefits to individuals and to society, and the resources demanded by these systems.

Training Objectives. The evidence suggests that thousands and thousands of newly prepared personnel will be needed by state education departments during the next decade.[24] Even though the quantitative demands for staff members are very great, it would not be realistic for the consortium to try to meet these large demands. Rather, it should concentrate upon the in-service and pre-service education of personnel who presently hold or are likely to hold important leadership posts in state departments. Included would be those who have or are likely to have general leadership responsibilities as well as those who have or will likely have major leadership responsibilities for such special areas as vocational education or guidance services. New preparatory programs relevant to the challenges leaders in state departments will continue to face, then, would be major outcomes of the consortium effort. The following objectives might be among those which would guide activities:

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[24] David Clark has recently estimated that the annual output of persons preparing for research, development, and diffusion roles in fiscal 1966 was approximately 1800. The demand for newly prepared personnel in these categories during fiscal 1966, on the other hand, was 9,000. In 1972, the estimated output, according to present planning, will be approximately 13,000, while the estimated demand for persons with such training will be close to 48,000. The proportion of the output needed by state departments is not clear; however, the demand for diffusion and development personnel, not to mention other categories of staff needs, will be substantial. (See David Clark. "Intermediate Report of the Study Roles for Researchers in Education," CRP #X-022, Mimeographed).

(1) new pre-service and in-service programs which provide personnel with the concepts, attitudes, and skills necessary for assuming leadership roles in relation to large, urban school systems;

(2) new pre-service and in-service programs which help state education department personnel contribute effectively to state educational planning;

(3) new pre-service and in-service programs which provide state department personnel with the perspectives, understandings, and competencies needed to administer, evaluate, and improve burgeoning federal education programs; and

(4) new kinds of instructional materials which can be used for preparing state education department leaders.

Consortium Activities

What activities can and should be undertaken to achieve the objectives noted above? Space is not sufficient to answer this question in detail. However, certain aspects of the question can be examined in relation to selected consortium objectives. In presenting concepts pertinent to the substance and process of consortium activities, the major purpose will be to provide a stimulus for further examination of the problem.

Research Activities. Potential research activities will be illustrated with reference to the one objective of advancing knowledge about the political environment in which state departments operate and the political processes which affect them only. Several political scientists have studied certain aspects of the state politics of education and an increasing, though yet small, number of professors of educational administration are beginning to do specialized studies in this area. Laurence Iannaccone's paper on "State Government and Education"[25] and the book by Nicholas Masters and his colleagues,[26] for example, illustrate recent developments. Activities which would expand and intensify research in such areas as the state politics of education would be germane to the work of the consortium and would assist various groups of scholars and state level administrators to understand the political aspects of state department administration.

At the present time there are perhaps twenty to thirty university scholars in departments of political science and educational administration with special interests in the politics of education. A majority of these persons have done studies in the area. However, it is likely that few, if any, know emerging work being done by all the other scholars and formal opportunities for cross-stimulation and cross-fertilization among all of the various scholars doing research in the field are lacking. Assuming that such opportunities represent highly valuable experiences, the question arises as to how cross-fertilization and cross-stimulation can be achieved.

The first step would be that of identifying with some precision the scholars interested in the state politics of education. When this task was achieved, a small committee of leading scholars could be convened to propose and to examine alternatives for advancing communication and stimulation among scholars in the area. An initial activity, for example, might be short-term conferences to provide all of the researchers opportunities to share the results of their work and to identify the conceptual frameworks and modes of inquiry now being used to study the politics of education. In this process attention could be given to the potential formation of interest groups based upon motivation to use particular sets of concepts and modes of inquiry.

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[25] Laurence Iannaccone. "State Government and Education."

[26] Nicholas Masters, et. al. State Politics and the Public Schools. New York: Alfred Knopf, 1964.

At such a conference other objectives might be explored. If there were two or three groups with common interests in given theories or modes of inquiry and a number of scholars with individual interests desiring to intensify work in the area, for example, alternative means to intensify research in the chosen area or areas could be examined. Among such means would be summer institutes in which scholars would have opportunities to design research activities. Some of the participating scholars might choose to work on individual proposals at the institute with the benefit of informal interaction with colleagues while others might choose to work in small interest groups. In both cases the researchers might profit from common consultant help such as might be provided by selected state legislative and executive officers both within and without state education departments. Consultant help concerning the funding of proposals from such agencies as the U. S. Office of Education could also be efficiently provided and effectively used.

As the work on the politics of education progressed, activities designed to expand the community of scholars could be generated. This could entail regional or national conferences designed for political scientists and professors of educational administration potentially interested in studying the politics of education and in encouraging graduate students to study in this area. The three major objectives of such conferences might be: (1) to open new channels of communication between scholars not now studying and those currently studying the politics of education; (2) to identify scholars with strong potential interests in the study of the state politics of education; and (3) to explore ways whereby the scholars identified could be aided in pursuing work in the area.

In advancing the study of state politics of education it would be important to define the field in sufficiently encompassing terms to include research on the interaction between state political systems and the federal system, on the one hand, and between state political systems and local systems, on the other. Extremely valuable contributions, for example, might be careful case studies with relevant commentary done in such areas as (1) state relationships to non-public schools as reflected in the recurring Amish controversy; (2) state department and federal relationships as expressed in the administrative aspects of selected federal legislation; or (3) state departments and big city relationships as represented in efforts to improve education for the disadvantaged or to deal with *de facto* segregation in these cities. Such cases should help to promote an examination of aspects of our political systems as well as to raise communication about intergovernmental relationships to a more concrete, meaningful, and constructive level.

In summary, then, there would be various activities which a consortium might employ to stimulate research on the state politics of education. These activities could be designed both to intensify work already underway and to expand research by involving scholars not now engaged in the study of state politics and education. The activities described could be adapted to other areas of study such as the leadership structure of state departments and the relationships between in-puts and out-puts in education.

Development Activities. Several different activities can be projected which would advance development in connection with state departments of education. Some of these will now be elaborated with reference to some of the consortium objectives noted earlier.

One model would be represented by the work of a leading scholar who had the necessary supporting staff and sources of advice and information from state education departments to give leadership to development activity. If the problem, for example, were that of defining emerging staffing requirements in state departments, and recommending professional incentives and educational programs to meet these requirements, then a scholar skilled in educational planning and manpower projection could appropriately take on the task. With the aid of supporting staff and the advice of state education department personnel, requirements and recommendations could be designed. During the development process there could be periodic progress reporting to representatives of all interested state departments to test concepts and to obtain analytical feedback on the development work. Special communication activities could be established near the end of the activity for those departments especially interested in implementing the recommendations.

Another model for activity would be teams of developers consisting of state department personnel and specialists in the problem area where development is to take place. If a given department wished to design a system for facilitating state planning in education, for example, the team might consist of urban planners, population experts, systems analysts, economists, specialists in educational administration, computer experts, and state department leaders. These persons would need special staff assistance to facilitate their efforts. The outcome might be the conceptualization and implementation of a system to advance state planning in education.

Still another model might emphasize task forces made up largely of state education personnel. Such task forces would receive needed assistance from consultants in universities or other agencies. If the objective of such a task force, for example, was to develop a plan for the effective use of computers by state departments to support leadership and planning in education, representatives from a number of state departments who have had some experience in this area could be recruited. These persons would have the assistance of consultants from business, government, and other agencies. The result might be plans which could be adapted for use by various state education departments.

Another type of activity might be based upon the assumption that development would take place in state education departments if the necessary information were provided leaders in these departments. For example, a given university might develop a center which concentrated upon the gathering and analysis of student and general population statistics and upon the periodic dissemination of these data to state education representatives in national meetings. At these meetings the implications of the statistics for educational planning could be explored and interpreted. Help could be provided personnel in state departments who were interested in follow-up activity.

In summary, then, there are various models for development activity. Some emphasize participation by scholars aided by the consultant help of state education departments. Others emphasize participation on the part of state department personnel aided by the advice of persons in universities and other agencies. Still others would emphasize joint participation with external staff help. These various models could be adapted to a variety of development problems.

Training Activities. The training objectives delineated above emphasize the need for preparing state department personnel of three kinds: those who could exercise leadership in relation to urban education, those who would advance educational planning, and those who could help meet major responsibilities encountered in administering burgeoning federal programs. Initial training activities, then, would involve the design of programs for recruiting and preparing personnel in these areas. Remarks here will be limited to selected decision problems which universities would encounter in designing new programs. These decision problems are (1) recruiting personnel for the differing programs, (2) defining specialized curriculum content, and (3) designing desired internship experiences. These problems will be discussed within the context of pre-service resident programs.

The thesis offered here is that personnel to be prepared to meet the various program objectives should be recruited from quite different talent pools. Even candidates being recruited to meet the one need of effective urban leadership might come from several different sources. Some, for example, might come from among those already in state education departments who have a growing interest in urban educational problems. Others might be recruited from big city school systems. Still others might come from urban agencies concerned with education-related problems such as poverty, delinquency, or minority groups.

Personnel to be recruited to enter programs to prepare educational planners could also come from several different sources. In terms of disciplinary backgrounds those who have had majors in such fields as economics, mathematics, urban and regional planning, and education, would seem to have special advantages. Those who have had experience applying operations research and systems planning within business firms and government agencies, those who have participated in planning for education in other countries, and those with staff experience in educational organizations including state education departments would also have some special advantages in entering programs to prepare planners.

Recruits for programs designed to prepare personnel to meet responsibilities for administering federal programs could come from state education department backgrounds and from local school districts. In addition, recruits out of federal agencies concerned with such areas as labor or welfare, and if feasible, out of state agencies would seem desirable. Promising young persons just out of college might also be considered.

What about the specialized aspects of preparation for the various personnel? Programs for those oriented toward urban education might encompass the sociology of large-scale organizations, problems and issues related to the financing of education and other public services in urban settings, minority groups, changing character of urban populations, and the government of large cities. Those preparing for planning careers, if they had already had work in education, might specialize in such areas as social, political, and economic trends; city and regional planning; planning for education in underdeveloped nations; concepts and techniques associated with operations research and systems planning; and the theory and practice of planning-programming-budgeting-systems. If, on the other hand, they had had work in the fields just noted but little experience with education, they might concentrate on the study of administration and education. Specialized content for those preparing to meet responsibilities associated with the administration of federal programs might include general work in government, law, management, leadership, as well as technical work in such fields as planning-programming-budgeting-systems. In addition, these persons might study patterns of federal support programs and the processes of federal policy making with regard to education.

Program designers would have to consider needed internship experiences. These too should probably be varied in character depending upon the career objectives and the experience backgrounds of the various candidates admitted to programs. Those preparing to concentrate upon urban problems would need an internship experience in a big city system, if they have been recruited from state departments or other agencies. Those recruited from big cities, on the other hand, might have their internships in state education departments. Candidates preparing for planning careers should have internships in agencies where planning is actually taking place, such as business organizations, government organizations, or educational organizations. Those preparing to administer federal programs would perhaps find an internship in a federal agency responsible for educational programs the most valuable experience or perhaps in a state department if they have already had federal experience.

While concepts such as those noted above are oriented toward resident work on university campuses, it should be made clear that activities to develop short-term in-service courses would also be highly desirable. Much of the content described above would be relevant to in-service education programs. In addition, special activities such as "living in" experiences of several weeks' duration in large school systems, in planning units, or in federal agencies could be designed.

To support the various training programs a major project should perhaps be undertaken to develop simulated situations and problems within the context of state departments and their environments. These simulated situations and problems could provide important learning opportunities for students in either in-service or pre-service programs. To achieve the simulation, data would be developed on a given state in a manner similar to that which has been followed in the Jefferson Township Simulation at the local level. For example, data might be gathered and organized on the structure of a selected state department, the governmental context in which it is found, student and general population forecasts in the state, economic forecasts, state studies of education and manpower training requirements, and various other background information. Planning problems could be projected and simulated within the context of 1970-80. Relevant planning concepts, methods, and techniques could be assembled as a part of the simulated situation to provide students an opportunity to apply them in the planning process.

In addition to planning problems, the project could simulate current problems associated with the various forces noted previously. These might include, for example, simulated problems dealing with state-federal relations, state department-big city questions, and interactions between state department personnel and government and business leaders.

In summary, a major aspect of consortium activities would be the design and implementation of new pre-service and in-service programs to prepare state personnel for urban leadership, for educational planning, and for the administration of large federal programs. Recruitment endeavors, curriculum content, and internships might vary for these differing personnel. Finally, a simulated state department with relevant simulated problems could be developed to facilitate the preparation of the designated personnel.

Division of Labor Among Universities

As already implied, organizations other than universities would be involved in the consortium effort. However, the major responsibilities for research, development, and training would rest with universities. Therefore, an important question arises concerning division of labor among universities in relation to the consortium effort.

The thesis is advanced here that careful consideration should be given early during the stages when the consortium's mission is being defined to the division of labor problem, and further, that each university should undertake clearly defined aspects of the consortium effort based upon its unique strengths and interests--aspects which should not duplicate but should compliment what other universities are doing. Such an approach to the division of labor, if pursued rigorously, would represent an attempt at systems planning within a national framework of universities represented by UCEA. In other words, the press toward more systematic and rational planning in education, referred to above, could be expressed within the context of universities.

Several reasons can be offered in support of the thesis advanced. First, the mission of strengthening state education departments is a major one which will require substantial resources and make special demands on universities. This will occur at a time when many other research, development, and training tasks of national import are requiring special deployment of personnel in universities. Therefore, it would seem highly desirable to allocate national resources within any consortium effort as efficiently as possible. A second reason relates to the effectiveness of the effort. If systematic and carefully informed judgments are made about subgoals to be achieved by the consortium and the most appropriate institutions to achieve these goals, the over-all effectiveness of the effort should be greater. This should result in part from the fact that the effort of each university would be more focused and intensive and would not suffer from the widespread diffusion of energies which sometimes results from unplanned efforts.

Developments of the last ten years would suggest that more refined ways of dividing institutional responsibilities in projects such as that represented in the projected consortium might be the next logical progression in the trend toward inter-university cooperation. Several projects in recent years, for example, have been designed and implemented in which professors from a number of universities have brought unique talents and motivations to bear upon particular tasks within an over-all plan. The point could be illustrated in relation to the current UCEA project which is concerned with revising the Jefferson Township Simulated materials. This project involves approximately twelve professors from nine different universities in the simulation of an existing school system and a number of administrative positions within it. All of these professors are performing different but logically interrelated tasks. One professor, for example, is simulating the position of the superintendent, another the elementary principalship, still another the position of business manager, while a fourth is taking responsibility for gathering and organizing needed background information on all of the positions being simulated, and so forth. Thus, a further move toward division of labor based upon differing institutional specialization would seem to be a logical next step.

In looking at division of labor at the institutional level, it is evident that there is a relatively small number of universities out of the 53 comprising UCEA which have as many as two or three professors with the capacities and motivations to engage in substantial research, development, and training activities related to state department administration. There would be additional universities where departments of educational administration might possess one professor who would be especially committed to improving state department administration. Planning should seek to encompass both types of universities. In other words, while the major work might take place within a consortium of five to eight universities, the effort could be constructively linked to professors outside the consortium.

A General Summary

Six major forces creating special challenges for state education departments have been described: the impact of federal legislation, the growth of urbanization, the increasing interest of government and business leaders in education, the press toward planning and evaluation in education, expansion of research and development activities, and emergent educational technology. Some of the challenges posed to state departments by these forces have been delineated and a strategy to help state education departments cope with the challenges has been set forth. The strategy proposed would involve carrying out a number of research, development, and training activities by a consortium of universities aided by state education leaders. With careful planning and systematic division of labor among participating universities, the consortium would offer rich opportunities for strengthening state education departments. At this stage in history it is, thereby, very important that universities actually capitalize on these opportunities and help ensure that state departments will continue to advance education which, in the words of the great state leader, Horace Mann, is "the supremest welfare of mankind on earth."

CHAPTER XIV

STATE EDUCATION DEPARTMENTS AND VOCATIONAL-TECHNICAL EDUCATION

DICK C. RICE*

That education should be regulated by law and should be an affair of the state is not to be denied. No one will doubt that the legislator should direct his attention above all to the education of youth, or that the neglect of education does harm to states.

-Aristotle

Introduction

The number and variety of changes with which American society must cope have increased rapidly during the past decade and have confronted society with problems of enormous complexity. Many problems seem to defy solution, even though the problem-solving potential of the nation has been raised to unprecedented levels by such factors as a continually growing gross national product, a position of world leadership, vastly improved data systems, and an increasingly better-educated citizenry.

Judicial, legislative and administrative actions taken in response to urgent social issues and problems have had pervasive effects on the roles and responsibilities of many social institutions. In education, as new roles appear to be emerging in all organizational contexts educators attempt to deal with aspects of such great social problems as racial bias and unequal opportunity, poverty and wasted lives, inadequately trained manpower for the growing needs of a technological society, and insufficient assurance that each person may have the opportunity to become a skilled, contributing citizen. Past experience seems to provide little guidance for dealing with such problems or with the organization, the policy and the procedure for capitalizing on resources made available by the federal government through the several major educational acts of the sixties.

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This work conference brought together a group of social scientists and a group of educational practitioners for three days of intensive dialogue examining the emerging roles of state departments of education and their divisions of vocational-technical education. The social scientists represented the fields of sociology, economics, psychology, political science, and education. They were invited to serve as author-speakers, to describe those forces and trends within their disciplines which influence state education departments to change, and to help identify specific implications of the forces they identified for both vocational and general education.

The practitioners of public education included administrators, and policy makers having a direct concern or responsibility for some phase of state education in their functions as deans of education, professors, state superintendents of public instruction, city school superintendents, state board of education members, state directors of vocational-technical education, and directors of research.

As expected, three days of intense interchange among this assembly of scholars and practitioners produced in the participants a better grasp of the implications for education of what is know in the supporting disciplines, a basis for communication across disciplines, better communication between general and vocational education, and a better understanding of the future problems in administration and organization of state education departments and their divisions of vocational education. Much fuel for discussion was furnished by the problems of pressure for change and transition in state education departments, creative federalism and the plenary power of the state over education, and public schools as implements of social change in a rapidly-developing, technological society. Discussants and speakers raised such questions as: How can state education departments and vocational-technical education divisions provide leadership to educational programs in local schools? What is the role of state education departments and vocational-technical education divisions in educational planning? Is vocational-technical education a fully-integrated, institutionalized aspect of American education? What strategies can be implemented to render the activities of state education departments and vocational-technical education divisions more relevant to the needs of our modern society? Vigorous discussion developed a variety of alternatives for action and explored additional facets of the role of state departments which were not considered explicitly in the social scientists' background papers presented elsewhere in this volume. This very stimulating discussion ranged back and forth over a wide variety of major (and minor) issues as the conferees explored the intricacies of many problems with varying thoroughness. Sometimes the conferees found themselves in substantial agreement; often they did not.

It seemed important that this volume include a chapter which somehow conveyed the sense and import of the three-day discussion, yet it was clear that such a chapter must be incomplete in its coverage of topics (the conference transcript contained over 350 pages) and that it could not be a report of concensus. So it is that this chapter was written as a summary of the author's conclusions based on the discussions of the conference, concerning the emerging role of state education departments. It is intended to provide neither the completeness of a stenographic record nor the accuracy of a voting tabulation, but it does strive for objectivity in identifying the relatively major issues and in stating the predominant implications of the discussions.

Coordination of Educational Efforts

More coordination is needed between the component *institutions in the American Educational System* for strengthening state education departments. This seems to characterize discussion on Culbertson's[1] paper. Conferees explained that the various educational institutions, as is true of the elements of all systems, are interdependent in the implementation of their roles. Lack of communication and coordination among institutions leads to overlapping responsibility in some areas and stress in others.

One of the major features of the emerging role of the state education department discussed was the responsibility for coordinating all activity of the educational system within the state. This role requires forging effective linkages for coordinated activity among the subsystems within the state education departments on an area basis for some activities and nationally for others. Additional linkages could be made with other institutions forming the American education system, e.g. national, state and local governments; federal educational agencies; regional laboratories, and research and development centers; private foundations, industry, universities, etc.

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[1] Jack A. Culbertson, "A Strategy for Strengthening State Departments through Research, Development and Training."

Intra-State Education Department Coordination

Discussants indicated that state education departments and their vocational education divisions should find ways to better coordinate state educational programs in order to meet both local and national needs. When it is considered that nearly 70 percent,[2] and in some districts 90 percent, of American youth will not go on to higher education degree programs, it seems apparent that effective programs are needed within the public schools to educate these majority of youth to become productive in the world of work.

Rural America of a few years ago produced sufficient numbers of young people well acquainted with both the need and the basic skill to work. In addition, they possessed a value system instilled at home in stable families. In most cases, European emigrants to this country during the last century, in spite of language barriers, had similar capacities for assimilation into productive occupations.

The problem today is changed. As indicated by Lecht[3], the skills necessary to gain entrance into the labor force in America rarely are learned at home. As indicated by the discussion of Hess' paper,[4] many youths reared in a ghetto or in rural poverty, lack even the example of an employed father. It seems that many of the youths leaving our secondary schools are ingnorant of the conditions and requirements of work.

Some comment at the conference suggested that vocational-technical education may well be the gateway to all learning for the majority of American youth who will not go on to pursue degrees in higher education.

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[2] United States Department of Labor, Manpower Report, and A Report on Manpower Requirements, Resources, Utilization and Training, (Washington, D. C.: U. S. Government Printing Office, April, 1967), p. 275.

[3] Leonard Lecht, "The Changing Occupational Structure with Implications for Education."

[4] Robert Hess, "Obtaining Optional Educational Opportunity for Disadvantaged Groups."

Just as the desire to go to college produces the incentive for some children to study the arts, sciences and humanities, just so may the desire to enter the world of work accomplish the same ends. In this sense, vocational education could contribute to more than the narrow goal of producing workers; it may also serve the more general educational purpose of producing educated Americans.

But as the discussions at the conference emphasized, complete assimilation of vocational programs at the state education department level at this time would be fatal because the programs are not yet fully institutionalized locally. Assimilation would raise the probability that vocational programs would be deemphasized in favor of other priorities in state education and, thus, move vocational-technical education further out of public education and into the purview of other public and private institutions.

An interim strategy would be to develop more effective lines of communication and cooperation between state education departments and vocational education divisions. In such an atmosphere, activities and programs for institutionalizing vocational education in local school systems could be planned. It was suggested in various ways at the conference that such programs could include:

1) legislation requiring practical acquaintance with the world of work by each student leaving the secondary school;

2) inservice education for teachers and state education department members to acquaint them with the use of vocational education as a process of education at all levels;

3) community conferences to help local leaders and laymen understand the need for and the role of vocational education in the total educational program;

4) curriculum planning and development with other state education divisions to implement vocational education processes at all educational levels;

5) acquisition of state funds to finance development of local programs and materials not bound by federal categorical aid programs;

6) development of new organizational structures and avenues for communication at the state

level to coordinate some functions in other state education divisions and vocational education divisions, and to insure effective communication and coordination of activity;

7) organization of department-wide educational planning agencies to identify educational goals and objectives, to identify and clarify problems, to search for and describe alternative solutions to aid decision makers in setting priorities and to develop long range and short range programs for solving problems.

Inter-State Education Department Coordination

Educational needs differ widely among states, other geographical divisions, ethnic groups, regional economies, and many other variables. It would be difficult to replace one state school system, or even one local school system with its buildings, books, curriculum and teachers, by another's system without the risk of a community uprising.

However, it is just as apparent that great similarities also exist in educational needs among states and communities according to geographical area, economy of the region, ethnic group, etc.

Many conferees indicated that whenever the common good can be served, two or more state education departments should develop strategies for coordinating activity in educational planning, research, development and other programs. Excellent models for such activity can be found in various Title V projects of the Elementary and Secondary Education Act of 1965 (ESEA). Two examples are the Eight States Rocky Mountain Project--Designing Education for the Future, discussed at the conference by Project Director Edgar Morphet, and the Education Commission of the States. It is the writer's observation that many of these efforts have in some way considered the need for vocational education, but since the primary source of funds for the projects has been the Elementary and Secondary Education Act of 1965 and not the National Vocational Education Act of 1963, vocational education has not been given primary attention. However, past experience indicates that many such projects pay attention to vocational education only to the extent that the participating states pay attention.

State Education Department Coordination With Other Institutions

So far, it has been reported that conference discussion pointed to a need for more coordinating activities between divisions of vocational education and the general state education departments. Further, it was reported that some discussants perceived a need for coordinating certain kinds of activity between state education departments. But the emerging role of the state education department also should include serving as the primary coordinating agency for all education programs of less than college grade in the state. Discussion indicated that the state education department, because of its financial, legal and status power, is potentially the most effective route for bringing the useful research, teaching and development resources of a region to bear upon classroom practice. Cooperative arrangements with universities may be used by state education departments, either individually or in groups, for the purpose of establishing consortia or critical masses of talent for joint research and development activity needed to improve the learning of students in the classroom. Regional laboratories, research and development centers, and institutions from the private sector should also be included in the consortia according to conference discussion on Culbertson's paper.

In summary, participants at the conference and authors of the various papers perceived the state education department of the future to be the primary coordinating agency for all non-college educational programs in the state. In addition, they saw the need for fully institutionalizing vocational education in American school systems, and recommended strategies for accomplishing this through improved communication and coordinated activity among all divisions within the department. Further, the interests and unique contributions of vocational education should be provided for in interstate and interinstitutional research, teaching and development activity.

Program Initiation, Evaluation and Maintenance

The consensus of conference participants seemed to be that state department leadership in educational affairs within the state is essential. The state education department of the future should retain its responsibility to the people of its state for evaluating school programs and for maintaining standards in the school programs. In addition, state education departments and their various divisions (e.g., vocational-technical education) should be responsible for initiating and assisting in the installation of new programs in cooperation with local schools. If state education departments are to escape the role of "ritualistic middlemen" between federal agencies and local schools, effective ways must be found to develop their leadership role as program initiators.

Sometimes, great over-arching national programs are not institutionalized locally because they are not sufficiently relevant to local conditions. School systems, school teachers and school clients vary widely throughout the country, indeed throughout each state. State leadership is necessary in adapting the federal programs to local conditions and for rendering them legitimate and relevant in the local school context. State leadership also is needed in planning and implementing programs to meet the unique needs of a specific state or region. General and vocational education leaders should work together in providing leadership in state education systems with the ultimate goal being the institutionalization of vocational-technical education programs and processes at all levels. Institutionalization in this context means acceptance, integration and willingness to maintain vocational-technical education programs and processes at all levels.

In order to accomplish the emerging leadership role, discussants indicated that leaders in general education should:

1) become effectively involved in political activity in order to influence legislation;

2) practice systematic long-range and short-range planning and programming for goal accomplishment;

3) reorganize and staff for both leadership and service;

4) stimulate and coordinate educational reasearch;

5) increase service to local districts.

Political Activity

Although it is a primary responsibility of leadership to develop programs and ideas, many conferees argued that these mean little without the human and material resources for implementation. In state education, as in all other state programs, the necessary resources become available through political activity. For many years, educators have shunned the dust andd clatter of the political arena. They seem to be content to let others fight the battle for money.

Discussion of three conference papers (Iannaccone,[5] Masters,[6] McLoone[7]) suggested that as more and more services are demanded of state government, the lofty purposes and good reputation of education alone will be less likely to ensure adequate allocation of resources. Some legislators, such as, Unrah of California, and Mayors, such as, Lindsey of New York, have shocked educators by asking for economic justification for program support. They have heard the criticisms leveled at education, and they wonder about the value received for money spent.

Some discussants asserted that often in the past, the various groups interested in education within the state have competed for the ear of the governor or legislature. In this way, educational institutions have been split into ineffective factions and pressure groups, differences have been emphasized, and educational programs have suffered. This dilution of effectiveness could be avoided if leaders in state education departments identified the groups interested in state education programs, and worked with group leaders to find common interests upon which to base effective legislative programs for education. It would seem that the clients of local vocational-technical education and their supporting interest groups in agriculture and industry would be complementary to established general education support groups.

Actually, this model has produced legislative results for many years for various groups in both state and national politics. Perhaps the oldest coalitions have existed in agriculture, and their well-known successes need not be restated here. Examples in education extend from the industry-agriculture coalitions at the federal level, which produced the Morrill Act in 1865 and the Smith-Hughes Act of 1918, to the

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[5] Lawrence Iannaccone, "State Government and Education."

[6] Nicholas Masters, "The Expanding Federal Role with Implications for State Education Department."

[7] Eugene McLoone, "Changing Characteristics of State and National Student Populations."

Cooperative Agency for Public Schools (CAPS) in Utah and the Plan for Educational Progress (PEP) committee in Ohio at the state level.

Other discussants at the conference cautioned participants that the model mentioned above is not applicable in states having a coalitional type of structure influencing education as described in one conference paper.[8]

Educational Planning as Leadership[9]

As a nation, we are a wasteful people. One might say that we are in the habit of living in the midst of plenty with no regard for the future. But in the last ten or fifteen years, our confidence in the future has been severely wrenched. During this time, we have seen Russian technology threaten American leadership; we have been reminded of pollution threatening our air and water supplies; our foreign policy is questioned; and dissident groups have threatened to burn down decaying cities.

Conferees discussing Lecht's paper[10] recognized that, suddenly, we are aware that the enormous output of our economy cannot solve all our problems at once in random fashion. We can no longer afford the luxury of waste. All levels of government are confronted with the problem of setting priorities, of deciding what comes first. This has led many state and federal agencies to organize special planning groups.

Two conference papers (McLoone[11] and Campbell-Sroufe[12]), and discussion emanating from them, show that the emerging role of the state education department in educational leadership may require the department to be the primary educational planning agency in the state. Divisions of the department, such as vocational education, should staff and organize for both long-range and short-range educational planning. State educational planning in this context encompasses the whole educational system, including all education, public and private, at all levels.

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[8] Iannaccone, loc. cit.

[9] The writer is indebted to Dr. Donald Sanders of the College of Education at The Ohio State University for some of the ideas expressed in this section.

[10] Lecht, loc. cit.

[11] McLoone, loc. cit.

[12] Roald F. Campbell and Gerald E. Sroufe, "The Emerging Role of State Departments of Education."

As indicated earlier, conferees characterized our educational system as an interlocking network of institutionalized education processes supported by society to serve our educational needs. A number of discussants indicated that, in this time of profound change in the needs of society, as evidenced in the nature of the problems faced, our educational system should change. To the extent that adaptation and change do not occur in our educational system as societal needs change, a gap will exist between what is done in education and what is needed. As a primary state educational planning agency, the state education department would have to accept responsibility for reducing this gap.

Planning and programming on a system-wide basis begins with the identification and explication of educational problems in the context of societal needs. The procedural sequence then is to propose solutions, assess possible solutions, set problem priorities, attack the selected problem, evaluate results, and revise the plan periodically. System-wide planning removes the focus from individual program planning to system-wide planning and programming and provides a means of marshalling all resources into a coordinated attack on major educational problems. Such comprehensive, systematic planning can help to find rational solutions, both interim and final, to significant educational problems and can provide the basis for securing adequate resources.

Staffing for Leadership

The 1966 annual report of the advisory council of the U. S. Office of Education on state departments of education shows that, as recently as 1962, nearly half of the state education departments in the country had fewer professional employees than do school systems enrolling about 1500 students.[13] The largest state education department in 1962 employed 271 professional people. This is equivalent to school systems in most small cities in the 15,000 population range. Because of the relatively, small number of professionals in state departments, very few people have a first-hand knowledge of the needs and problems of staffing for effective state education leadership service.

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[13] U. S. Department of Health, Education and Welfare, Improving State Leadership in Education, Report of the Advisory Council on SDE, Office of Education, (Washington, D. C.: U. S. Government Printing Office, 1966).

The leadership role of the state education department is dependent to a large extent upon its ability to attract and retain high quality professional personnel in sufficient numbers to carry out effectively the activities which implement vital functions. The problem of attracting and retaining high quality personnel has many facets, but in terms of immediate strategies for solution, three modes of action were urged in the conference discussions: 1) Revision of personnel policies particularly those relating to salary and benefits; 2) expand sources of personnel to include others besides teaching and school administration, and 3) initiation of inservice and preservice education programs for state leadership personnel.

Upgrading Salaries and Benefits

The improvement of salaries and benefits to state education department professional employees as a strategy for attracting and retaining qualified leadership personnel is supported by a recent study of 34 state vocational education divisions.[14] Fifty-one percent of the vocational education supervisors (agency heads) viewed the problem of losing qualified personnel as becoming increasingly more serious and they listed the number one cause as low salaries. The study also included responses from 130 qualified people who had left state vocational education service during the last half decade, over 73.1 percent moved to positions paying higher salaries.

Extending Personnel Sources

In addition to conference discussion centering on the topic of extending personnel sources, two of the conference authors (Campbell-Sroufe,[15] Nyquist[16]) specifically cited the problem. This conference concern is supported in The Center study (Rice and DuVall[17]) of state vocational education divisions. In that study, the typical division professional employee was an experienced, certified teacher holding a master's degree and hired from the state where he currently served in the state department. When selection is limited to this pattern, it is difficult to employ specialists in research, budget analysis, urban affairs, data processing, and planning. Yet, many of the over-riding problems faced today require that these skilled services be extended.

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[14] D. C. Rice and L. A. DuVall, Professional Personnel in State Divisions of Vocational Education, (Columbus, Ohio: The Center for Research and Leadership Development in Vocational and Technical Education, 1967).

[15] Campbell and Sroufe, *loc. cit.*

[16] Ewalt Nyquist, "Emerging Functions of State Departments of Education."

[17] Rice and DuVall, *loc. cit.*

In order to recruit the personnel needed, conferees suggested, the search for personnel should be extended in several ways: across state lines, beyond the traditional ranks of teachers, to short term (consultant) help in priority specialties, and to new concepts in hiring such as two or more states sharing professional personnel.

Inservice and Preservice Education

Scholars in the field of educational administration believe that leaders are not necessarily born that way, but that they can be developed through educational programs. Current vocational teacher-education programs may not in themselves provide an effective knowledge base for leadership personnel in state education departments. As part of their leadership role, state education departments and vocational divisions should work with selected teacher-education institutions to develop both inservice and preservice education programs for leadership personnel development.

It was suggested at the conference that preservice programs should take full cognizance of currently available knowledge regarding education for leadership, including the internship concept as a possible method for providing effective experience while in training. In addition, new information about the unique aspects of state education department leadership should be gathered and organized as a basis for new courses, seminars and workshops.

Regular, well planned, and organized inservice education programs should be developed to provide department personnel with the opportunity to learn educational planning concepts, leadership principles, ways to use research, etc. Supervisory personnel in The Center study cited previously[18] preferred workshops on the practical problems of leadership as the vehicle for inservice education for leadership in state divisions of vocational education. Such workshops should be effective in bringing the act of state leadership into closest proximity to teaching about it.

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[18] Ibid.

Both preservice and inservice education programs should employ the best consultant help available from a variety of institutions in both the private and public sectors. In addition, materials simulating and clarifying actual case situations should be developed, proven and used.

Leadership in Research

Discussion at the conference indicated that the state education department should not accept a major role in the conduct of basic educational research. However, it may be possible for state education departments and vocational education divisions to influence research institutions to investigate specific kinds of problems within the state or within an area. Such research could be done in conjunction with two or more states or nationally in cooperation with many states and the U. S. Office of Education. Institutions involved could come from either the private or public sectors, and include, for example, foundations, universities, research and development centers, and regional education laboratories.

Getting effective new information and processes accepted in the schools should be the primary concern of the state education departments in educational research. The legal relationship of the state education departments to the schools, and the configuration of fiscal and status incentives they control, make them potentially the most effective linking agencies to local schools. Using these unique relationships to encourage and initiate pilot programs, demonstration projects and inservice education workshops, in conjunction with such groups as local boards, regional laboratories, and university service bureaus, the state department and its vocational education division can exert leadership in developmental educational research.

Service to Schools

The conferees did not discuss the service aspect of the emerging role of state education departments to the extent that either Nyquist[19] or Campbell-Sroufe[20] treated the subject. But some concern was expressed that state education departments may be attempting to provide the wrong services and should reassess the services offered in relation to goals and objectives.

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[19] Nyquist, loc. cit.

[20] Campbell and Sroufe, loc. cit.

Services provided to local schools via the state education departments include school lunch programs, vocational rehabilitation, central purchasing of various materials, facilities planning, legal services, operation of special schools, and may others. Services perceived as needed but not prevalent include planning, in-depth evaluation, urban education assistance, negotiations consultation, and inservice education.

Specific Implications for Vocational-Technical Education Division[21]

As stated in the introduction, the primary purpose of the conference was to develop a concept of the emerging role of the state division of vocational education in the context of the general state education department. The following comment concerns specific implications, drawn from conference discussion, for state divisions of vocational education. The implications are discussed under five headings: political, personnel policy, research, organization and improvement of instruction.

Political Implications

Divisions of vocational education always have been attuned to the political realities of life. They are creations of federal and state political activity. The unique aspects of today's society, and the changing state educational role, hold the following political implications for state divisions of vocational education.

(1) State divisions of vocational education (SDVE) should understand their existing relationships with the legislatures.

Discussion at the conference and in the various papers indicates that there seldom is a direct, formal relationship between state legislatures and state education departments or divisions of vocational education. Legislatures sometimes distrust the motives of educators and educators often find themselves reacting to legislative proposals rather than influencing their development.

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[21] The writer is indebted to Dr. Joseph Nerden of the Department of Industrial Education at North Carolina State University for summarizing implications for State Divisions of Vocational Education at the conference. Some of these comments were drawn from the summary.

The SDVE should sponsor in-depth studies to determine the existing real situation and to develop effective strategies for influencing the state legislative process.

(2) The SDVE should critically review existing state law relating to vocational education.

Decision makers in the legislature and in the departments of education should be apprised of the strengths and weaknesses in existing state law relating to vocational education. Such an appraisal should be objective, should show examples of needed improvements, and should be used as the basis for modifying, updating state policy in vocational-technical education.

(3) Leaders in SDVE must find ways to utilize the power of the total educational system in state policy development for vocational-technical education.

It is becoming ever more evident that educators in all levels and in all areas, along with other groups having educational interests, must identify areas of common concern and work together if they are to influence policy making.

Professional Personnel Policy Implications

No matter how well an institution is organized to implement its various functions, it can achieve its objectives only to the extent that people involved have the necessary knowledge and skills. The following suggestions concerning personnel policy seem relevent to SDVE.

(4) The personnel needs of the SDVE indicate that new sources of professionals should be developed

The traditional source of state leadership personnel in vocational education has been the classroom. Two factors make this source inadequate. First, administrative and supervisory ability are not necessarily correlated with good teaching and good classroom teachers in vocational-technical education are needed in the classroom today as never before. State division competition for these people increases stress on local schools. In the second place, many of the new, essential functions of the division require data-processing specialists, researchers, budget analysts and others whose skills are not usually found among the teachers. They are found in places like industry, universities, and research institutions. SDVE will have to compete with these institutions for personnel, and may have to cross state lines in the quest. In many cases, it will be necessary to revise state plans and even state law to obtain qualified personnel.

(5) Inservice education programs for SDVE professional personnel must be implemented.

These programs are needed to provide the opportunity for state leaders to improve and update existing knowledge and skills, and to develop the new knowledge and skills needed to meet new needs of our rapidly changing society.

(6) SDVE should begin working with selected universities and colleges to develop preservice state-leadership preparation programs.

The elements of leadership education unique to state vocational education leaders must be identified. These elements should be combined with the more general elements of leadership education to provide effective preservice programs for state leaders. The development of preservice programs also requires the development of ways to identify potential leadership personnel early in their professional development.

Implications for Research

Although the role of the SDVE is not clear with reference to research, it seems reasonable to assume that it will include stimulating certain basic research and initiating and monitoring developmental research in the schools. Some of the implications of this for the role of the SDVE follow:

(7) The SDVE should identify needed research projects and provide the necessary incentives to encourage competent research institutions to undertake the projects.

Basic research is not forseen as a primary role of the SDVE, but identifying and stimulating basic research relevant to the aims and goals of the department is part of the role. This task requires that the division employ personnel with knowledge in the field of research who are capable of helping division educational planners and policy makers identify and describe research needs.

(8) In keeping with its role in the improvement of instruction, the SDVE should develop cooperative relationships with industry,

research and development institutions, and regional educational laboratories for the implementation of promising pilot and demonstration projects throughout the state.

New ideas, programs, and processes, many of which are developed in research and development institutions, are vital in the improvement of instructional programs in vocational-technical education. The SDVE can provide access to the local schools for pilot, demonstration and research projects. It is the logical disseminator of innovation and sponsor of inservice education for the development of vocational teacher personnel. Since the research and development institutions and SDVE have complementary goals, more cooperation and coordination of activity is both logical and desirable.

(9) Part of the on-going research program of the SDVE should be concerned with developing data systems for educational planning purposes that are compatible with those of other SDVE for providing information vital to regional and national program development.

According to Joseph Froomkin,[22] such data systems could show relative manpower needs in the various occupations, and the cost of training programs for different occupations. In addition, follow-up studies could provide stratified earnings records, pertinent information about motivational factors and an assessment of performance. Policy makers for vocational-technical education already are being asked for this type of information.

Implications for Organization

(10) The SDVE must find ways to become part of the overall communication network within the state education department.

It was clear in conference discussion that inadequate communication is a primary problem confronting both general and vocational education leaders at the state level. This situation has resulted in misunderstanding and misinterpretation of motives. This is serious because if communications were to break down, it could lead to the establishment of essentially separate educational systems.

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[22] Letter, Joseph Froomkin, Assistant Commissioner for Program Planning and Evaluation USOE to Dick C. Rice, April 20, 1967.

SDVE leaders may be able to alleviate communications problems by seeking to improve liaison with other divisions in state education. This could be accomplished by reorganizing for certain functions where shared personnel could be employed. Newsletter exchanges and joint staff meetings for exploring common problems also could be helpful.

(11) More use should be made of temporary or task oriented groups across speciality lines both in the SDVE and across division lines in the department.

One of the problems in the SDVE is the recruitment of highly specialized talent, such as systems analysts, for example. The demand for such personnel exceeds the supply, and state departments have not been able to compete effectively for them with other institutions. However, if SDVE and other divisions can cooperate to define specific tasks and projects of mutual concern (e.g. systems analysis of all divisions), specialists might be engaged very effectively on a fixed-term contract basis. In some cases, established research institutions could be employed for such activity. This alternative approach to problem solving should lead to the identification of other areas of cooperative activity in the division and in the department. Task force activity across specialty and division lines would require that new and more flexible organizational structures be developed in the SDVE.

(12) The SDVE should assess its functions and remove or meld any unnecessary duplications of functions performed elsewhere in the department.

Some of functions are duplicated in the general department of education and in SDVE; guidance, certification, and data processing for example. Such duplication of services may provide each group with maximum control, but it also may dissipate valuable resources.

(13) The SDVE should forge stronger cooperative ties with other local, state, federal, and private agencies and programs concerned with meeting the increasing need for vocational education

With vocational education enrollment projected as double current enrollment by 1975,[23] it is clear that current provisions for the development of teachers, programs and facilities cannot meet the demand in only eight years. The SDVE should assume leadership in marshalling all possible help to solve the problem. This would require full cooperation of the social institutional activity involved, and stimulation of private institutions and industry. New alternatives should be sought for providing more vocational education, more effectively, for more people, on a continuing basis and in a variety of settings--including the public schools.

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[23] C. J. Cotrell and I. E. Valentine, Compilation of Technical Education Instructional Materials: Supplement I, (Columbus, Ohio: The Center for Research and Leadership Development in Vocational and Technical Education,1967) p. 195.

New organizational structures would be necessary to create continuing liaison and communication with the numerous federal programs, both within and outside the U. S. Office of Education. The new structure should permit effective liaison and communication between state institutions for social welfare.

(14) Program planning and evaluation agencies should be developed in SDVE.

These agencies are necessary at all state levels in order to clarify aims and goals, identify problems, determine alternative problem solutions and develop programs. SDVE educational planners should participate in the overall department planning effort and in the assessment of the total state educational system's achievement of educational aims and goals.

Implications for Improvement of Instruction

(15) SDVE should lead in the development of major breakthroughs in the vocational-technical education curriculum and give particular attention to the concept of vocational education as part of the process of education at all levels of schooling.

Major curriculum breakthroughs have occurred in almost all areas of elementary and secondary education. Changes in vocational education curriculum have been slow in coming. According to Feldman[24] this may be due to the relative isolation of vocational educators from the rest of the educational system as to resistance to change.

Experienced experts in the educational process as applicable in vocational-technical education are to be found in such diverse places as the armed forces, general education, kindergarten education, medical and dental schools, UNESCO, art schools and engineering schools. SDVE should utilize the experience of these and other groups to search for concepts, processes and methods applicable in new vocational education curricula.

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[24] M. J. Feldman, "Public Education and Manpower Development," Ford Foundation Reprint, Speech at Columbia University, June 1967.

(16) Incentives, e.g. financial and status, controlled by the SDVE should be used to stimulate attainment of superior standards of performance in local programs.

In many cases the incentives of SDVE are used to stimulate local schools to achieve only minimum standards of performance in local programs. Proper application of incentives can result in superior performance in existing programs and in the development of newer, innovative programs.

(17) Leaders in SDVE should get out of the business of classroom supervision, and become more involved in demonstration programs and in-service education for larger groups of teachers.

The inefficiency and cost of providing supervisory services to local classroom teachers on a one to one basis cannot be justified. This is particularly true when such activity detracts from the general improvement of instruction by diverting resources away from the development and dissimination of new ideas and improved methods.

APPENDIX

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